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BRITISH MEDICAL ASSOCIATION AND THE NATIONAL HEALTH SERVICE BILL

We print below a copy of the Government White Paper, in which are described the provisions of the National Health Service Bill.

The White Paper is followed by a report submitted for the information of the profession by the Council of the British Medical Association.

This falls into two parts: A, a statement of the principles adopted by the Negotiating Committee with explanatory paragraphs; B, a report of the Council of the British Medical Association on the Bill to be submitted to a Special Representative Meeting to be held on May 1 and 2, 1946. All members of the profession, members and non-members of the Association alike, are urged to give this document the most careful study and to attend the meetings of the profession to be called in every area in the next few weeks.

NATIONAL HEALTH SERVICE BILL

SUMMARY OF THE PROPOSED NEW SERVICE*

[*This White Paper contains a general description of the proposed health service. It is intended only as a factual summary, and, being only a general summary, cannot always be in precise terms.*]

INTRODUCTORY

1. The Bill provides for the establishment of a comprehensive health service in England and Wales. A further Bill to provide for Scotland will be introduced later.

2. The Bill does not deal in detail with everything involved in the service. It deals with the main structure. Within that structure, further provision will be made by statutory regulations—on lines which the Bill lays down and subject always to the control of Parliament.

Scope of the Service

3. The Bill provides for the following kinds of health services:

(i) Hospital and specialist services—i.e., all forms of general and special hospital provision, including mental hospitals, together with sanatoria, maternity accommodation, treatment during convalescence, medical rehabilitation and other institutional treatment. These cover in-patient and out-patient services, the latter including clinics and dispensaries operated as part of any specialist service. The advice and services of specialists of all kinds are also to be made available, where necessary, at Health Centres and in the patient's home.

(ii) Health Centres and general practitioner services—i.e., general personal health care by doctors and dentists whom the patient chooses. These personal practitioner services are to be available both from new publicly equipped Health Centres and also from the practitioners' own surgeries.

(iii) Various supplementary services—including midwifery, maternity and child welfare, health visiting, home nursing, a priority dental service for children and expectant and nursing mothers, domestic help where needed on health grounds, vaccination and immunization against infectious diseases, additional special care and after-care in cases of illness, ambulance services, blood transfusion and laboratory services. (Special school health services are already provided for in the Education Act of 1944.)

(iv) The provision of spectacles, dentures, and other appliances, together with drugs and medicines—at hospitals, Health Centres, clinics, pharmacists' shops, and elsewhere, as may be appropriate.

Availability of the Service

4. All the service, or any part of it, is to be available to everyone in England and Wales. The Bill imposes no limitations on availability—e.g., limitations based on financial means, age, sex, employment or vocation, area of residence, or insurance qualification.

5. The last is important. If the National Insurance Bill now before Parliament is passed into law, almost everyone will become compulsorily insurable, and after payment of the appropriate contributions will become entitled to the various cash benefits—including sickness and maternity benefits—for which that Bill provides. A proportion of their contributions will be used to help to finance the health services under the present Bill, but the various health service benefits under the present Bill are not made conditional

* London, H.M. Stationery Office, Cmd. 6761, 3d. net.

upon any insurance qualification or the proof of having paid contributions. There are no waiting or qualifying periods.

6. The service is to be available from a date to be declared by Order in Council under the Bill, and it is hoped that this will be at the beginning of the year 1948.

The Service to be Free of Fees or Charges

7. The health service is to be financed partly from the Exchequer, partly from local rates, partly from the help (mentioned above) which part of the National Insurance contributions will give. There are to be no fees or charges to the patient, with the following exceptions:

(i) There will be some charges (to be prescribed later by regulations) for the renewal or repair of spectacles, dentures, and other appliances, where this is made necessary through negligence in the care of the articles provided.

(ii) There will be charges (taking into account ability to pay) for the provision of domestic help under the Bill and for certain goods or articles (e.g., supplementary foods, blankets, etc.) which may be provided in connexion with maternity and child welfare or the special care or after-care of the sick.

(iii) It will be open to people if they wish, in certain cases, to pay for additional amenities within the arrangements of the service—e.g., to pay extra for articles or appliances of higher cost than those normally made available, or to pay charges for private rooms in hospitals (which they will nevertheless be able to obtain free where privacy is medically necessary).

General Organization of the Service

8. The Bill places a general duty upon the Minister of Health to promote a comprehensive health service for the improvement of the physical and mental health of the people of England and Wales, and for the prevention, diagnosis, and treatment of illness. To bring physical and mental health closer together in a single service, it transfers to the Minister the present administrative functions of the Board of Control in regard to mental health (the Board retaining only its quasi-judicial functions connected with the liberty of the subject).

9. The Bill proposes that the Minister shall discharge his general responsibility through three main channels:

(*a*) For parts of the service to be organized on a new national or regional basis—i.e., hospital and specialist services, blood transfusion, and bacteriological laboratories for the control of epidemics—the Minister is to assume direct responsibility; but he is to entrust the actual administration of the hospital and specialist services to new regional and local bodies established under the Bill. These bodies are to act on his behalf in suitable areas to be prescribed by him, and they are to include people of practical experience and local knowledge and some with professional qualifications. Special provision is made for hospitals which are the centres of medical and dental teaching.

(*b*) For parts of the service to be organized as a function of local government—i.e., the provision of new Health Centre premises and a variety of local domiciliary and clinic services—direct responsibility is put upon the major local authorities, the county and county borough councils. They will stand in their ordinary constitutional relationship with the central Ministry, but their general arrangements for these local services are made subject to the Minister's approval.

(*c*) For the personal practitioner services both in the Health Centres and outside—i.e., the family doctor and dentist and the pharmacist—new local executive machinery is created, in the form of local Executive Councils. One half of the members of each of these Councils will consist of people nominated by the major local authorities and by the Minister, and the other half of people nominated by the local professional practitioners concerned. There will normally be an Executive Council for each of the major local authorities' areas, and they will work within national regulations made by the Minister.

10. By the Minister's side, to provide him with professional and technical guidance, there is to be set up a Central Health Services Council. This will include people chosen from all the main fields of experience within the service—with various standing committees of experts on particular subjects, medical, dental, nursing, and others.

11. Each of these branches of the new organization is described in more detail in the rest of this paper.

HOSPITAL AND SPECIALIST SERVICE

12. This part of the service covers hospital and consultant services of all kinds, including general and special hospitals, maternity accommodation, tuberculosis sanatoria, infectious diseases units, provision for the chronic sick, mental hospitals and mental deficiency institutions, accommodation for convalescent treatment and medical rehabilitation, and all forms of specialized treatment—e.g., orthopaedics, cancer, neurosurgery, plastic surgery, paediatrics, gynaecology, ophthalmic services, ear-nose-and-throat treatment, and others.

13. It is made the Minister's general duty to provide these physical and mental hospital services, but he is to entrust their administration to Regional Hospital Boards, together with separate Boards of Governors for the teaching hospitals, in manner to be described later.

14. The existing premises and equipment of voluntary and public hospitals are transferred to the Minister under the Bill, and he is empowered also to acquire by purchase—if necessary—other hospitals and their equipment which may be required for the purposes of the new service. If in any particular case he is satisfied that the transfer of a hospital is not in fact necessary for the new service he can—with that institution's concurrence—except it from transfer. The general transfer of hospitals includes the present mental hospitals and mental deficiency institutions.

15. The endowments of voluntary teaching hospitals—defined in the Bill to mean, broadly, all their property other than buildings and their contents—will pass, not to the Minister, but directly to the new Boards of Governors, who are to be free to use them as they think best, but are required, so far as practicable, to see that the purposes for which they were previously usable are still observed.

16. The endowments of other voluntary hospitals are to pass to a new Hospital Endowment Fund which the Minister is to set up and administer in the following way. He is first to meet from the Fund, to such extent as may be settled by subsequent regulations, existing debts and liabilities attaching to the voluntary hospitals concerned. He is then to apportion the capital value of the Fund among the several Regional Hospital Boards and, as it were, to earmark to each a portion. The income of each portion will then pass automatically to each Board, and it will be free to use it as it wishes, within such general conditions as may be prescribed. Any Board will be able also at any time to draw on its portion of the capital for any purpose which the Minister approves.

17. The Boards—and the Boards of Governors of teaching hospitals—are fully able under the Bill to receive gifts or legacies, and to hold any property on trust, for any purposes connected with the hospital or health services.

18. The detailed arrangements affecting the new Hospital Endowment Fund, its apportionment and administration, are left to be settled by later statutory regulations.

Hospital Administration

19. The Minister is to entrust the future administration of all the hospitals (other than teaching hospitals) to Regional Hospital Boards to be set up under the Bill for such hospital service regions of the country as he will prescribe—each region being such that its services can conveniently be associated with a university medical school. There will probably be between sixteen and twenty of these regions.

20. Each Board will be composed of people chosen and appointed by the Minister for their individual suitability for the task, but before making the appointments the Minister is to consult any university with a medical school in the region, bodies representative of the medical profession, the local health authorities of the area, and others concerned, including, initially, those with experience of the voluntary hospital system. The Boards are to include some members with experience of the mental health services.

21. Each Board is required by the Bill to appoint, in accordance with a scheme approved by the Minister, local Hospital Management Committees, one for each large hospital or related group of hospitals forming a reasonably self-contained hospital service unit. Each of these Management Committees will contain members appointed after consulting the major local authorities in its area, the Executive Councils for the general practitioner services in its area, the senior medical and dental staff of the hospitals concerned, and others, including those with experience in voluntary hospitals.

22. It is to be the duty of the Regional Boards, within the scope of general regulations and such particular directions as the Minister may give, to undertake on his behalf the general administration of the hospital and specialist services in their regions. With the Minister, and in collaboration with the teaching hospitals, each Board will plan, and execute the plan for, a co-ordinated hospital and specialist service for its region.

23. It is to be the duty of the Management Committees to carry out day-to-day management of the particular hospitals under their control—within such limits as are to be prescribed by the Minister. They are to be the local managing bodies on the spot, and they will, for example, appoint nursing and other general staff (appointing them as employees of the Regional Boards). They will be able, as required, to set up small house-committees for any individual hospitals within their care.

24. It is the object that the Regional Boards, with their local Management Committees, shall enjoy a high degree of independence and autonomy within their own fields. Their use of existing voluntary hospital endowments has already been described. For the general financing of their hospital services, however, they will look to the Exchequer, and they will be given as much financial freedom—by a system of block annual budgets or otherwise—for local initiative and variety of enterprise as general principles of Exchequer responsibility make possible.

Teaching Hospitals

25. Special arrangements are provided for teaching hospitals —that is, hospitals or groups of related hospitals which are designated by the Minister as providing the facilities for undergraduate or postgraduate clinical teaching. These will enable any hospital or group of hospitals to attain "teaching" status whether it is already a teaching hospital at the outset of the scheme or not.

26. The general system of Regional Boards and Management Committees will not cover the teaching hospitals. The Minister is to constitute for each such hospital or group of hospitals its own separate Board of Governors, including members nominated by the university, the Regional Board for the area, and the senior staff of the hospital itself, and members appointed after consultation with the major local authorities and other organizations concerned, including the previous governing bodies. The Board of Governors of a teaching hospital will be responsible generally for administering their hospital on the Minister's behalf.

27. The financial arrangements in regard to existing voluntary endowments of the teaching hospitals have already been described. For the general financing of their services they will look to the Exchequer, and again the general object will be to assure them all the financial freedom and autonomy of management which the general conception of a nationally reorganized and nationally financed service makes possible. In this case, in addition, it is intended to keep in the forefront of any arrangements the special position of these hospitals as the centres of clinical teaching and technical experiment and innovation.

28. The fact that special administrative and financial arrangements may be made for teaching hospitals does not mean, however, that these hospitals are not to form an integral part of the hospital service as a whole. They will be joined with the Minister and the Regional Boards in the general planning and arrangement of the hospital services of each Region, and the Regional Boards will be represented on their Boards of Governors.

Medical and Dental Schools

29. Medical and dental schools are not to be transferred to the Minister or to the Board of Governors of the teaching hospital with which they are associated. No property which is held for the purposes of these schools is to be transferred. The schools will continue to be owned and administered, in London, by their own governing bodies, and elsewhere by the governing bodies of the universities of which they form part; and the Bill provides for the transfer of any existing hospital property held for school purposes to these governing bodies.

30. The Bill contains also a special provision relating to medical and dental schools, based on recommendations of the Interdepartmental Committee on Medical Schools (the Goodenough Committee). Any medical or dental school of London University which is not yet a body corporate is required to take steps within six months of the passing of the Bill to become incorporated.

Hospital Staffs

31. The staff of all hospitals in the service will be in the employment of the Regional Boards or Boards of Governors of teaching hospitals, as the case may be. Specialists taking part in the service, whole-time or part-time, will be attached to the staff of hospitals. Part-time participation in the service will not debar the specialists from also continuing any private practice outside the service which individual patients may wish them to undertake.

32. Special provision is to be made by regulations affecting the appointment of senior medical and dental staff employed on the staff of hospitals. In these cases the Regional Board or the Board of Governors, as the case may be, is to be required to advertise vacancies and to constitute an expert advisory appointments committee. The committee will draw up a list, from among the applicants, of those suitable by qualification and experience for the vacancy, and the person to be appointed will then be selected from that list by the Board.

33. The Boards will determine the terms of engagement of any staff employed in the hospital service. The Minister, however, is empowered to make regulations governing the qualifications, conditions of service, and remuneration of any or all classes of hospital staff—as of the staff engaged in any other part of the health service. Before making regulations he will consult any appropriate organizations representing the staffs concerned, and it will be his intention—wherever appropriate—to use existing, or set up new, negotiating machinery to facilitate those consultations. Existing hospital officers employed on a paid whole-time basis are to be protected, either by being transferred to the new bodies or by compensation if they are not transferred or are re-employed on less favourable terms than before.

"Pay-bed" Accommodation

34. Where there are single bedrooms or small wards in hospitals the Minister is empowered to make them available to patients who wish to buy greater privacy by paying the extra

cost; but this is to be subject always to the requirements of patients who need such accommodation on medical grounds, and they will be able to have it without payment.

35. In addition, the Minister is empowered to provide separate pay-bed rooms or blocks for which people can pay the whole cost privately and in which part-time specialists within the service can treat private patients. This power is subject to the Minister's deciding, in each hospital, whether it is reasonable to provide such private accommodation having regard to the needs of the general service, and it is also subject to the overriding right of other patients to be admitted to it, without payment, if medical considerations urgently require it. Private patients using the accommodation will pay their own specialists' fees, but the Bill enables the Minister to prescribe maximum fees which specialists may charge in these circumstances.

Other Centralized Services

36. The Minister is made directly responsible for the provision of two other services, both of them developed from services which have grown up during the war.

37. The first is a bacteriological service for the control of the spread of infectious diseases, including, in particular, the provision of laboratories. These will be operated—at least in the first instance—by the Medical Research Council on the Minister's behalf and their services can be made available to medical men and others who wish to make use of them.

38. The second is a blood transfusion service—for the collection of blood from volunteer donors, the provision of "blood banks" and blood products at hospitals, and of mobile transfusion teams which will be on call for hospitals not possessing facilities of their own and for specialists and general practitioners.

39. The Minister is also expressly empowered by the Bill to conduct research, and to give financial help to voluntary agencies conducting research, into any question relating to the prevention, diagnosis, or treatment of illness or mental defectiveness. Boards of Governors of teaching hospitals and Regional Boards are also empowered to conduct research.

GENERAL PRACTITIONER SERVICES

40. This part of the service covers the personal health services provided by general medical practitioners and dentists and the supply of drugs, medicines and appliances.

41. To arrange these services locally new bodies—to be called Executive Councils—are to be established in the area of each county and county borough. As already explained, each Council is to be so composed that one half of its members are professional—appointed by the local doctors, dentists, and chemists through their own representative committees in the area—while the other half of the members are to be appointed partly by the local county or county borough council (one-third of the Executive Council) and partly by the Minister (one-sixth). The Chairman will be appointed by the Minister. Single Executive Councils may sometimes be established for the areas of two or more local authorities.

Health Centres

42. A main feature of the personal practitioner services is to be the development of Health Centres. The object is that the Health Centre system, based on premises technically equipped and staffed at public cost, shall afford facilities both for the general medical and dental services (described immediately below) and also for many of the special clinic services of the local health authorities (described later), and sometimes also for outpost clinics of the hospital and specialist services (already described). Beside forming a base for these services—e.g., providing doctors with equipped and staffed consulting rooms in which to see their patients—the Centres will also be able to serve as bases for various activities in health education.

43. The Bill makes it the duty of the county and county borough councils to provide, equip, staff, and maintain the new Health Centres to the satisfaction of the Minister. The local authorities will directly administer such of their own local clinic facilities as they may provide in the Centres. Doctors and dentists, however, who use the new Centres while participating in the general personal practitioner service will be in contract only with the new Executive Councils, and it will be for those Councils to arrange with the local authorities for the use of the Centres' facilities by those doctors and dentists. In the case, for instance, of doctors in the general practitioner service the Centres will, in effect, stand in place of the doctors' own surgeries, and the doctors' responsibilities to their patients on their personal lists—e.g., in visiting their patients' homes and in general responsibility for their patients at all times—are not affected by whether a doctor practises from a Health Centre or not.

Family Doctor Service

44. All doctors are to be entitled to take part in the new arrangements in the areas where they are already practising when the scheme begins. Taking part will not debar them from also continuing to make private arrangements for treating such people as still wish to be treated outside the service instead of taking advantage of the new arrangements, provided that such persons are not on their lists as public patients or on the lists of their partners in a Health Centre. People will be free to choose their own doctor (including their present doctor) subject to the doctor's consenting and being in a position to undertake their care.

45. All doctors taking part in this part of the new service will be in contract with the Executive Council for the area in which they practise. The Executive Council will be required to draw up and publish lists of all general practitioners who wish to participate. People will then choose their doctor and each doctor will have his own list of the people whom he has agreed to attend. There will be machinery for allocating among the doctors concerned such people as wish to take advantage of the service but have not chosen a doctor for themselves or have been refused by the doctor chosen by them. The relationship of the doctor with any person on his list—i.e., his functions under this part of the service—will then be similar to the ordinary relationship of doctor to patient as it is now known, except that the doctor's remuneration will come from public funds and not directly from the patient.

46. The Bill itself does not determine the detailed terms and conditions for doctors joining in the service or the doctors' remuneration. These are left to be settled by regulations, and the necessary regulations will be made in consultation with the doctors' professional representatives. It is, however, the intention that remuneration should take the form of a combination of fixed part-salary and of capitation fees, the latter varying with the number of persons whose care is undertaken by each doctor and being so graduated as to diminish in scale as the total number of patients rises. Variations of the fixed part-salary will be possible so as to take account of different circumstances and experience and the differing conditions of practice in particular areas. It is intended also to institute, under powers contained in the Bill, a contributory superannuation scheme for doctors taking part in the new arrangements.

47. Actual rates of remuneration for doctors can be determined, in consultation with the profession, only after the report has been received of the Spens Committee—a special committee set up, by agreement with the profession's representatives and under the chairmanship of Sir Will Spens, with a membership half medical and half non-medical, to make an independent report on the appropriate range of remuneration for doctors taking part in a publicly organized service of this kind.

48. When the necessary regulations affecting terms of service and remuneration have been settled it will be for the Executive Councils to contract with the doctors on the lines thus prescribed.

Distribution of Medical Practices

49. To help in dealing with the needs of under-doctored areas it is intended, as already indicated, to adjust the scales of remuneration of doctors so as to provide additional inducement to practise in less attractive areas. In addition, a new body to be called the Medical Practices Committee, mainly professional in composition, is to be appointed under the Bill to regulate in

future the succession to old, or the opening of new, practices within the service.

50. To begin with, an appointed day will be fixed and all doctors then in practice will have the right to have their names included on the lists drawn up by the Executive Councils for the areas in which their existing practices are. After the appointed day any doctor who wishes either to join the public service for the first time or, if he is already in it, to go and practise in a new area will need to obtain the consent of the Medical Practices Committee. He will normally ask to have his name included in the list of the Executive Council for the area of his choice, and that Council will inform the Committee. The Committee may give consent either unconditionally or subject to a condition as to the general part of an Executive Council's area in which he practises. They will not be able to withhold consent on any ground except that there are already enough doctors practising in the public service in the area in question. If, when a practice becomes vacant in a particular area, there is more than one applicant for taking it over, the Committee will decide to which doctor the necessary consent is to be given. A doctor whose application to practise in a particular area is refused, or granted only subject to conditions, is given the right to appeal to the Minister.

51. Regulations governing all these arrangements will, among other things, require Executive Councils to report from time to time to the Medical Practices Committee on the number of doctors required to meet the needs of their areas and on the existence of vacant practices on their lists.

Sale and Purchase of Practices and Compensation

52. The above control of succession to, or opening of, practices will apply to all practices which are wholly or partly within the service. It will, therefore, make the sale of the goodwill of such practices inappropriate, and the Bill provides for the prohibition of the sale of such practices in future and for compensation to existing practitioners in respect of the consequent loss of selling values.

53. Doctors who join in the public service at the outset will be entitled to compensation in respect of loss incurred through being unable thereafter to sell their practices. In addition, any doctor who dies or retires from practice between the passing of the Act and the appointed day, and whose practice has not been sold in the meantime, will qualify for compensation. If he is compensated, his practice will be regarded as having come within the service at the appointed day.

54. The total amount of compensation to be made available to the profession under the Bill is a sum of £66 million for England and Wales and Scotland, and the appropriate proportion of this is authorized to be paid in England and Wales under the present Bill. Provision is made for the total sum to be reduced if the number of practitioners taking part in the service falls substantially short of the expected total.

55. Regulations will govern the detailed method of apportioning the global sum among the doctors entitled to compensation and the manner and times at which it is to be paid. It is intended that the settling of the apportionment of compensation among the individual doctors shall be left in the main to the profession itself, and the Minister will accept any reasonable proposals within the total sum. Normally compensation is to be payable on the retirement or death of a doctor, though payment at an earlier date will be arranged where hardship (e.g., through outstanding debts) would otherwise arise. In the meantime interest on the compensation due is to be paid each year to the doctor at the rate of 2¾% per annum.

Doctors and the Health Centres

56. As and where the new Health Centres are developed existing doctors in the area will be able, if they wish, to use the consulting rooms and other facilities so provided in place of their present surgeries, so far as they are participating in the new service. Their doing so will not affect the general arrangements already described.

57. Any group of doctors joining in practice from a Health Centre, however, will be encouraged—wherever possible—to enter into a partnership arrangement whereby their joint remuneration within the service is pooled and then divided among them on some agreed basis of apportionment.

Supply of Drugs, Medicines, and Appliances

58. Those who use the general practitioner service will be entitled to the supply, free of charge, of necessary drugs, medicines, and appliances. A charge will be made if appliances have to be prematurely repaired or replaced as a result of carelessness, and if the patient chooses to be supplied with more expensive appliances than those normally supplied he will be expected to meet the additional cost involved.

59. Every properly qualified pharmacist who wishes to join in the new service will have the right to do so. The Executive Council in each area is to draw up and publish a list of pharmacists who join in the service, and patients will be able to obtain their supplies on the prescription of their doctor either from the shops or other premises of a pharmacist or from any Health Centre where dispensing services are provided, as the patient chooses. Drugs, medicines, and appliances required for hospital purposes will be supplied as part of the hospital service.

60. Regulations, made in consultation with the professional organizations concerned, will govern the detailed terms and conditions, and rates of remuneration, on which pharmacists participate in the new arrangements.

Dental Service

61. The arrangements for dental services will be on rather a different basis from the family doctor service. Priority will be given to expectant mothers and young people. This is to be done through the local health authority's maternity and child welfare service (which the Bill expressly provides is to include dental care) and through the school health services under the Education Act, 1944. Outside the priority arrangements there will be a general dental service made available, but there will not at first be any guarantee that all people will be able to obtain full dental care without waiting. Any dentist who wishes to participate in the general dental service will have the right to do so, and the Executive Council in each area will draw up and publish a list of those who undertake to participate in the service.

62. The object will be to develop general dental services in the Health Centres, or corresponding Dental Centres, as much and as quickly as possible. In the Centres it is intended that dentists shall be able to participate either whole-time or part-time and shall be remunerated by appropriate salaries for the amount of time which they give to the new service. Outside the Centres it will be open to anyone to arrange with any dentist in his own surgery who agrees to undertake his or her dental care. The dentist will normally be able to start treatment without further reference, and subsequently to submit a claim for payment from public funds. For certain forms of treatment, however, the dentist will submit an estimate of what is required to a new professional body established by the Bill—the Dental Estimates Board. The Board will have branch offices in different parts of the country whose function it will be to approve dentists' estimates for treatment to be given or appliances to be supplied. Payment will be made to the dentist by the Executive Council in accordance with a prescribed scale of fees or, in some cases, on special estimates determined by the Dental Estimates Board.

63. The detailed terms and conditions, and rates of remuneration, on which dentists will participate in the service are not settled in the Bill itself, but—as with the doctors—are to be the subject of subsequent regulations made in consultation with the profession's representatives. The general range of remuneration is to be settled in the light of the findings of a committee established (by agreement with the profession) on lines similar to the Spens Committee on Doctors' Remuneration. Dentists taking part in the general dental service will not be debarred from treating under private arrangements anyone who does not wish to take advantage of the service.

64. When the appropriate regulations affecting remuneration and general conditions of participation in the service have been

settled, it will be for the Executive Council to contract with the dentists on the lines so prescribed.

Eye Services

65. The object is to secure that the care of the eyes, with sight-testing and the supply of spectacles, is carried out—as rapidly as resources allow—in special ophthalmic departments and clinics forming part of the hospital and specialist service. These clinics will be in the charge of specialist medical ophthalmologists, and in them the qualified sight-testing opticians will also play their proper professional part. Spectacles will be obtainable either at the clinics themselves or at the premises of dispensing opticians taking part in the service.

66. While this full eye clinic system is developing, however, a supplementary eye service is to be arranged by the Executive Councils in each area. Their arrangements are to be made with suitably qualified general medical practitioners, sight-testing opticians, and dispensing opticians who undertake the supply of spectacles. The whole of the arrangements are to be entrusted by each Executive Council to a special committee—an Ophthalmic Services Committee—which will draw up and publish lists of the medical practitioners and opticians who have the necessary qualifications and who wish to participate in the service, on the same lines as the lists of doctors and dentists. The patient will then have freedom of choice among the doctors and opticians on the lists.

67. As in the rest of the general practitioner services, the terms and conditions and rates of remuneration of those participating in the supplementary eye service, arranged by the special Committee of the Executive Council above, will be the subject of later regulations.

68. People will be entitled both to sight-testing and to the supply of spectacles, free of charge, either at the specialist ophthalmic clinics or through the supplementary scheme just described. The Bill provides, however, that as soon as the Minister is satisfied that adequate ophthalmic services are being provided in any area through the specialist clinic services he may wind up the supplementary service in that area.

Miscellaneous

69. A special Tribunal is to be set up to investigate cases where it is claimed—either by the Executive Councils or otherwise—that the continued inclusion of any doctor, chemist, dentist, or optician in the lists drawn up by the Executive Councils would be prejudicial to the efficiency of the service. The Tribunal will have a legal chairman appointed by the Lord Chancellor and will in each case include a member of the same profession as the person whose case is being investigated and one other—the latter two being appointed by the Minister. Where it is satisfied that the representations are justified, the Executive Council will be directed to remove from the list the name of the doctor, dentist, chemist, or optician, who is given the right to appeal to the Minister. Where the Tribunal so decides a similar direction can be applied to all lists in all areas, with the same right of appeal.

70. Provision is also made that where any doctor, dentist, chemist, or optician has already been disqualified from participation in the present National Health Insurance service, and the disqualification has not been removed, he shall not have the right to participate in the new service.

71. Where the Minister is satisfied, after inquiry, that the services provided by doctors, dentists, or chemists in any particular area are not adequate he is empowered to take such steps as he considers necessary to secure an adequate service.

72. The Minister is empowered to arrange with universities and medical and dental schools for the provision of "refresher" courses for doctors and dentists in the service, to contribute towards the cost of these courses and to pay the expenses of doctors and dentists attending them.

LOCAL GOVERNMENT SERVICES

73. This part of the health service comprises the local and domiciliary services which are appropriate to local government, rather than to central government or to any specially devised machinery. The Bill unifies these services in the existing major local authorities—the county and county borough councils—and provides for the formation of joint boards wherever, exceptionally, this may be found desirable.

74. For most of these services, the Bill requires the local health authorities (as they are to be called) to indicate to the Minister the way in which they intend to carry out their responsibilities, and it requires the Minister's general approval. Their proposals, so indicated, are to be made known also to the Regional Boards and Boards of Governors for the hospital service, to the Executive Councils for the general practitioner services, and to any voluntary organization which to the local authority's knowledge is working in the same field in their area.

75. The purpose of this last requirement is to ensure that these local arrangements are fitted appropriately to the hospital and specialist services for which the Minister is more directly responsible and to the general practitioner services which will be operated within his general regulations and control. This interrelation between the different arms of the health service is reinforced by the provision (already mentioned) for the local health authorities to nominate one-third of the members of the Executive Councils for the general practitioner services and to be consulted by the Minister in the appointment of Regional Boards, Management Committees, and Boards of Governors in the hospital and specialist services.

76. It will also be reinforced in the ordinary process of administration by the personal contacts of the local Medical Officers of Health and the principal medical and other officers of the other bodies, and by various practical devices such as the establishment of local co-ordinating committees of medical and other officers and by the use, wherever feasible, of common employment by different bodies of the same part-time medical or other staff.

77. The various functions comprised in the local government part of the health service are summarized below.

Maternity and Child Welfare and Midwifery

78. The Bill makes it the duty of every local health authority to make arrangements for the care of expectant and nursing mothers and of children under 5 years of age who are not attending school and who are therefore not covered by the school health service. Their arrangements will include antenatal clinics for the care of expectant mothers, post-natal and child clinics, the provision of such things as cod-liver oil, fruit juices, and other dietary supplements, and, in particular, a priority dental service for expectant and nursing mothers and young children.

79. The Bill transfers these functions from such of the present "minor" authorities—the non-county boroughs and the district councils—as are at present exercising them. But, for co-ordination with the school health services, provision is made for delegating child welfare to "district executives" in the same way—and with the same rights for the minor authorities—as is done for the school health service under the Education Act, 1944.

80. The same authorities—county and county borough councils—are also made the supervising authorities for the purposes of the existing Midwives Acts; that is to say, they are made responsible for a complete midwifery service for mothers who are confined at home. The midwives are to be employed either by the local health authority itself or by voluntary organizations with whom the authority comes to an appropriate arrangement. Attendance at the confinement is not to be made the general duty of the doctor within the general medical practitioner service, but the midwife will have the usual right—and duty—to call in a suitably qualified doctor in case of need. The general practitioner's services will nevertheless be available to the ordinary extent of general advice and health care to a woman before and after confinement as at any other time.

81. Mothers who for any reason have their confinements in a hospital or maternity home will be in the care of the hospital and specialist service. It will also be the object of that service to provide locally for all specialist obstetric or gynaecological care which may be needed in relation to the ordinary domiciliary

service of the local authority. The requirement of Ministerial approval to the local authority's arrangements will link together the two aspects of the maternity service—domiciliary and institutional.

Health Visiting and Home Nursing

82. It is made the duty of the local health authority to provide for a full health visitor service for all in their area who are sick, or expectant mothers, or those with the care of young children. This widens the present conception of health visiting (as concerned with mothers and children) into a more general service of advice to households where there is sickness or where help of a preventive character may be needed.

83. It is also made the duty of the local health authority to provide a home nursing service for those who—for good reason—need nursing in their own homes.

84. In both of these activities the local authority can, if it likes and if the Minister approves, make all or part of its provision by arrangement with voluntary organizations to act on its behalf.

Local Mental Health Services

85. The main mental treatment and mental deficiency services are to be part of the new hospital and specialist arrangements under the Bill. Local health authorities, however, are given responsibility for all the ordinary local community care in the mental health service—that is to say, the ascertainment of mental defectives and their supervision when they are living in the community. This part of the service covers also the initial proceedings for placing under care those who require treatment under the Lunacy and Mental Treatment Acts.

Vaccination and Immunization

86. Compulsory vaccination is to be abolished by the Bill, but it is to be the duty of the local health authority to provide free vaccination and diphtheria immunization for anyone who desires them. This service the authority will provide by making arrangements with doctors who are taking part in the general practitioner service—paying appropriate fees to those who undertake it. The vaccines, sera, or other preparations required may be supplied without charge by the Minister to local health authorities and doctors, and the service may, if circumstances demand, be extended to cover vaccination and immunization against other diseases beside smallpox and diphtheria.

Ambulance Service

87. Apart from vehicles which may need to be provided as part of the hospital service, the provision of the main ambulances and hospital transport required for the health service becomes the duty of the local health authorities, either directly or by arrangement with voluntary organizations. In future the local health authority's ambulances may—and must, if necessary—operate outside their own area.

Care and After-care of the Sick

88. Local health authorities are given a new power, and duty where the Minister so requires, to make approved arrangements for the purpose of the prevention of illness and the care and after-care of the sick. This can include such things as the provision of special foods, blankets, extra comforts, and special accommodation for invalids and convalescents and the making of grants to voluntary organizations doing work of this kind (but it expressly does not include cash allowances to individuals or families, which is the function of National Insurance). A charge may be made in appropriate cases.

Domestic Help

89. Under the existing law local authorities are empowered to provide home helps as part of their maternity and child welfare functions, and, during the war, this power has been extended by temporary enactments to enable them to provide domestic help in a wider range of circumstances. The Bill makes this power permanent and extends it to cover the provision of domestic help, subject to the Minister's approval, to any household in which it is needed on grounds of ill-health, maternity, age, or the welfare of children. The local health authority will be allowed to make appropriate charge for this service.

Health Centres

90. The duty of the local health authorities to provide and maintain general Health Centres, both for their own activities and for the general practitioner services, has already been described.

Health Committees

91. Local health authorities will, in the future, be required to appoint statutory health committees (comparable in many ways to their statutory Education Committees) and to refer to them all matters relating to the discharge of their functions under the Bill. The health committees may be authorized to exercise functions on behalf of their parent authorities, and there is discretion to appoint by co-option expert members who are not members of the authority itself.

GENERAL ADMINISTRATIVE AND FINANCIAL PROVISIONS

Central Health Services Council

92. In paragraph 10 the setting up of new technical advisory machinery by the Minister's side has been mentioned. In more detail, the arrangements are these. To advise him generally on the administration of the health service the Minister is to have beside him a Central Health Services Council. The members are to be doctors, dentists, nurses, and other professional people concerned with different parts of the service, together with people having experience of hospital management, of local government, and of mental health services—all of them appointed by the Minister in their individual capacities, but after consultation with the appropriate representative organizations. The Presidents or Chairmen of six of the principal medical bodies in the country are also to serve on the Council, *ex officio*.

93. The new Central Council will be free to advise the Minister of its own initiative on any expert aspect of the services, as well as on matters expressly referred to it by him. It will report annually to the Minister, who will lay the report before Parliament—with his own comments, if he wishes—unless he is satisfied that it would be contrary to the public interest to publish the report or any part of it.

94. The Minister is empowered also to constitute various Standing Advisory Committees on different technical aspects of the new service. These Committees are not specified in the Bill. They will in fact deal with medical aspects of the service, mental health, dentistry, nursing, pharmacy, and any other matters justifying special advisory machinery. They will deal with questions referred to them either by the Minister or by the Central Council and will have direct access to the Minister as well as to the Council.

Default Powers of Minister

95. The Minister is given default powers against local health authorities and any of the bodies constituted by the Bill—the various hospital bodies, Executive Councils, and others—if they are not carrying out their functions satisfactorily. He can make an order directing them to do whatever may be necessary, and then, if still not satisfied, he may take over their functions, permanently or temporarily, himself.

Position of Officers

96. Regulations made by the Minister may lay down the qualifications and conditions of service of any or all of the officers and employees of all bodies (including voluntary organizations) concerned with providing services under the Bill. In regulating conditions of service or remuneration, it will be his object—as already stated—to use appropriate machinery of discussion and negotiation with representatives of those affected.

97. The Minister is empowered to establish contributory superannuation arrangements for the staffs of hospitals (including the specialist services), Executive Councils, the bacterio-

logical and blood transfusion services, and doctors and dentists in the general practitioner services. The employees of local health authorities will be entitled to the benefits of the existing local government superannuation scheme, which can be modified by regulations under the Bill for staff in the health services in order to secure the maximum of interchangeability with other parts of the general service. The employees of local voluntary organizations can be brought within local superannuation schemes. The general object will be to make arrangements such as will secure freedom of movement between the central and local services, and within these services, and also between services provided under the Bill and other health services.

98. Protection is given to existing officers of voluntary hospitals, Insurance Committees, and local authorities whose functions are transferred or extinguished by the Bill, by providing for their transfer and re-employment by the appropriate authority under the new service or for their compensation if they were previously employed whole-time and suffer loss as a result of the change-over.

Miscellaneous

99. The Bill contains also a number of miscellaneous provisions relating to such matters as the transfer of the property of local authorities and Insurance Committees, the holding of inquiries, the procedure for making regulations and orders, and the repeal or adaptation of the existing law to fit the new conditions.

FINANCE

100. The new service is to be financed mainly from the Exchequer, assisted by a payment of some £32 million transferred from the National Insurance Fund, and partly from local rates with the help of Exchequer grant.

101. The Exchequer will bear the cost of the hospital, specialist, and other centrally organized services, the cost of the family practitioner services, half the cost of the local health authority services, together with the cost of central administration. The rates will bear half of the cost of the local health authority services previously described.

102. The expenditure of local health authorities on their services—including any payments which they make to voluntary organizations for services on their behalf—is to rank for Exchequer grant, calculated in accordance with regulations to be made under the Bill. The grant is to be on a "weighted" 50% basis, with no local health authority receiving more than three-quarters or less than three-eighths of their expenditure.

103. The transfer of the cost of the local authority hospital services from the ratepayers to the taxpayers (together with other changes which are in contemplation outside the scope of this Bill) must profoundly affect the present financial relations between the Exchequer and local authorities. The primary financial effect of the transfer of hospital services from local authorities will be to benefit the richer areas appreciably more, generally speaking, than the poorer areas. Radical changes will be necessary in the general scheme of Exchequer grants in aid of local authorities, therefore, to secure that over-all the policy of the Government of concentrating those grants so far as possible where the need is greatest is further developed. The whole of this question is at present under consideration by the Government with a view to the introduction of a reformed scheme by the time the new health service comes into actual operation.

104. The financial memorandum attached to the Bill itself gives details of the general financial background of the new proposals.

A. THE PRINCIPLES OF THE PROFESSION

The Negotiating Committee, representative of the British Medical Association, the Royal Colleges, the Royal Scottish Medical Corporations, the Society of Medical Officers of Health, the Medical Women's Federation, and the Society of Apothecaries, crystallized the views of the medical profession as a whole on the subject of a National Health Service in the following statement:

"For a quarter of a century the medical profession has stressed the need for a complete health service.

The profession is willing and anxious to co-operate with the Government in evolving this service, for it believes that the knowledge and experience of the profession are indispensable contributions to its success.

It re-emphasizes that good housing, social, economic, and environmental circumstances are the principal factors in the maintenance of health and the prevention of disease. It urges the expansion of medical research.

In the interests both of the public and of medicine, the profession regards the acceptance of the following principles as essential:

I. The medical profession is, in the public interest, opposed to any form of service which leads directly or indirectly to the profession as a whole becoming full-time salaried servants of the State or local authorities.

II. The medical profession should remain free to exercise the art and science of medicine according to its traditions, standards, and knowledge, the individual doctor retaining full responsibility for the care of the patient, freedom of judgment, action, speech, and publication, without interference in his professional work.

III. The citizen should be free to choose or change his or her family doctor, to choose, in consultation with his family doctor, the hospital at which he should be treated, and free to decide whether he avails himself of the public service or obtains independently the medical service he needs.

IV. Doctors should, like other workers, be free to choose the form, place, and type of work they prefer without governmental or other direction.

V. Every registered medical practitioner should be entitled as a right to participate in the public service.

VI. The hospital service should be planned over natural hospital areas centred on universities in order that these centres of education and research may influence the whole service.

VII. There should be adequate representation of the medical profession on all administrative bodies associated with the new service in order that doctors may make their contribution to the efficiency of the service."

Behind these principles are considerations of profound importance to the public and to medicine.

For the medical profession to be converted into a technical branch of central or local government would be disastrous both to medicine and to the public it serves. The doctor's primary loyalty and responsibility should be to his patient.

The interest of the public demands that he should be free—as civil servants and local government officers cannot be—to act, to speak, and to write on professional matters according to the dictates of his conscience, unhampered by interference from above. He should never be required, or be in a position to be required, to modify his standards of medical certification at the behest of the State, however concerned the State may be with the solvency of a Social Security Fund.

This independence of professional judgment and responsibility of action, evolved over the centuries, is inconsistent with the conception of the doctor as a civil servant or local government officer, whose first loyalty would be to his employing body. Valuable though these forms of organization and control are in many fields of human activity, they would be fatal to the personal doctor–patient relationship which lies at the heart of good medicine.

The doctor should be the patient's doctor and not the Government's doctor. The doctor's freedom is the public's freedom.

A whole-time salaried medical service is inconsistent with free choice of doctor. It would mean the equal distribution of work between equally paid doctors regardless of the wishes and preferences of the public. It would tend to impose a uniformity in a form of work in which initiative and originality are essential. It would tend to bureaucratize what should be a human service.

It would destroy what is a proper incentive with most kinds of people in most kinds of work—the relationship between remuneration and the amount and value of work done or responsibility accepted. It might tend to replace competition for patients by competition to avoid them.

The proposals of the Government must be examined to see whether they lead "directly or indirectly to the profession as a whole becoming full-time salaried servants of the State or local authorities." It is not enough to postpone the danger. The public should satisfy itself that the proposals will not tend, sooner or later, to this form of service.

Medicine is an art as well as a science. The family doctor is faced with human problems which for their solution demand not merely science but in addition wisdom, kindliness, and knowledge of human nature. He is friend as well as adviser. He can give of his best only where complete confidence exists between patient and doctor. This confidence can exist only under conditions which leave the patient entirely free to choose or reject a particular doctor. Further, the patient in consultation with his family doctor should be free to choose the hospital, clinic, or other institution at which he should obtain his medical care. He should not be required to choose a particular doctor or to attend a particular institution. There will be those in all sections of the community who will prefer to arrange their medical care for themselves outside the public service. The freedom of the citizen requires not only that he shall be free to obtain his medical care privately but that the arrangement should not be such as to penalize him or his doctor if he does. In practice this means that the citizen should be free to obtain private medical care from general practitioner, consultant, or specialist, that practitioners in the public service shall not be precluded from providing it, and that adequate facilities should be available in hospital for them to do so.

Now that the war is over no compulsion, direct or indirect, should be brought to bear upon any citizen to work in any particular area. This principle should apply to doctors as to others. It would be inconsistent with this principle for doctors to be required by law to obtain permission from a governmental body before practising in any area, whether in the public service or privately, or both. The fact that the Government has decided to collect money from the public for medical services and to enter into arrangements on the public's behalf with doctors to provide them does not entitle a Government to apply direction to doctors merely because they desire to enter into contract with the Government to accept liability to treat the beneficiaries under the Social Security Scheme, in effect the whole population. A satisfactory medical service will be achieved only if it is staffed by doctors satisfied with their terms and conditions of service. A doctor under duress is no more likely to achieve this satisfaction than is any other worker in similar circumstances.

B. THE B.M.A. COUNCIL'S REPORT*

The State recognizes and registers a medical practitioner only when it is satisfied that by education, training, and experience the practitioner is fully qualified to offer his services to the public. Other governmental agencies, central or local, should not apply an additional test. No doctor should be in the position, having passed through the medical curriculum, satisfied the stringent requirements of the General Medical Council—the body established by statute for this purpose—of finding that he is not acceptable to this or that central or local body and so find himself unable to practise his profession, with his prolonged and expensive training and experience wasted. The General Medical Council amply protects the public without the imposition of other statutory conditions by other tribunals.

Doctors have an important contribution to make in the planning, organization, management, and development of health services. Indeed without it a service satisfactory to the public is impossible. They do not seek to control such services, but the public interest demands that at every level of administration there should be adequate representation of the medical profession. Their advice should be presented by them to administrative bodies by medical members of such bodies speaking with the authority which derives from such membership. This principle applies to central and local bodies alike, including regional bodies and the public health committees of local authorities. This is a matter of public and not only professional interest.

STATEMENT ON THE NATIONAL HEALTH SERVICE BILL

The Council, having considered the Government's proposals, recommends to the Representative Body:

That the following statement of policy on the Government's Bill for a National Health Service be approved:

1. The profession, while anxious and willing to co-operate with the Government in evolving a complete health service, is opposed, on grounds of public interest, to certain important features of the Government's proposals.

ORGANIZATION

2. In the Bill it is proposed that the Minister should assume general responsibility for the service and discharge this responsibility through three main channels. In the case of hospital and specialist services he will delegate the bulk of the administration to new regional and local bodies. He will place the responsibility for domiciliary, clinic, and

* The general principles of this report apply to Scotland as well as to England and Wales with the Secretary of State taking the place of the Minister, large burgh councils taking the place of county borough councils, subject to the modifications which the Bill contains on such points as the provision of health centres by the central instead of the local authority.

health centre services directly on local health authorities (county and county borough councils). He will place the responsibility for general practitioner services on specially appointed local bodies acting within national regulations made by himself.

3. Will this proposed structure secure what the profession has long been seeking—the proper co-ordination and correlation of the country's medical services? Will the individual citizen be well served by the proposed administration? When he seeks attention from his family doctor he will be availing himself of a service administered by the local executive council. If that service is rendered in a health centre he will receive it in premises owned by another local body, the local health authority. If his doctor recommends him for hospital treatment he will pass to yet another administration, that of the regional body.

4. In the case of an expectant mother she may receive her medical care from her family doctor at home or in the consulting room, although the proposals on this point are not clear. She may attend an ante-natal clinic, part of the local health authority's service, receiving it there from a whole-time local authority medical officer. But if she proposes to be confined in hospital she may receive her ante-natal care at a parallel set of ante-natal clinics, this time administered by the regional body and staffed by hospital medical officers. If her confinement takes place at home she may be attended by a midwife appointed by the local authority, a doctor in the family doctor service, and, if specialist help is sought, by a specialist in contract with the regional body.

5. In the case of infectious disease the responsibility for preventing its spread will be that of a local authority, probably a lesser local authority. If a case of infectious disease needing hospital treatment occurs the patient will be conveyed to another service administered at the regional level.

6. There appears to be little immediate prospect of bringing to the general practitioner forms of work which should, in the interests of the patient, be undertaken by him. While the *ultimate* object may be to make unnecessary the provision of medical treatment by the school medical service, what is proposed at the outset and for an indefinite period is that such services shall be separately provided and organized by local education authorities, supervised by the Ministry of Education. No attempt is made to bring together the general practitioner service now rendered to mothers and children in clinics and the main general practitioner service, other than the suggestion that immunization, together with vaccination, should be carried out by general practitioners. To employ general practitioners in clinics is not enough. Much of the work now done in clinics should be undertaken by general practitioners as part of their normal work for those under their care. Child welfare responsibility is to follow educational responsibility, which in many cases will mean that a further authority is involved in health administration, a local authority which is not a county or county borough council.

7. The Association criticizes the proposed administrative arrangements as likely to divide the service into at least three compartments, to perpetuate or create barriers between general practitioner and hospital, between hospital and health centre, between the family doctor service and the local authority clinic services, between local authority medical officers and hospital staffs and general practitioners, as well as between the bodies employing them.

8. The Minister will provide and manage a public health pathological laboratory service for the control of infectious diseases, but local authorities are still to be free to provide their own laboratory services. No mention is made of the clinical pathological services unless these are to be regarded as part of the specialist service coming under regional administration.

9. At what level can co-ordination best be secured? It is not enough to state, as the Minister stated in reply to questions from the Negotiating Committee, that co-ordination between general practitioner and hospital services can be secured by the policy of administration of the Minister, by the work of the Minister's officers, by the presence of some general practitioner members on regional boards and local management committees; that general practitioners will be responsible for the care of their own patients in general practitioner hospitals, which do not yet exist; that the general practitioner will consult freely with the specialist at the hospital, or work as a clinical assistant, or join his local medical society. There will be only such co-ordination as the administration makes possible.

10. In the Association's considered view, co-ordination should take place at the regional level. Regional boards should assume responsibility for the planning and administration of hospital and non-hospital medical services alike, for the building, ownership, and administration of such health centres as may be developed, for the clinic and other treatment services of local authorities; in short, for all treatment as distinct from environmental services. Responsibility for a completely co-ordinated maternity service, including domiciliary midwifery, for health visiting and home nursing services should rest with the regional body. It is recognized that effective local administration may require that regional boards delegate some of their responsibility to appropriately constituted local or area bodies responsible to them, just as it is proposed to delegate responsibility for individual hospitals to local hospital management committees. The statutory responsibility for the provision of these services should be placed not upon local health authorities but on regional bodies.

11. This proposal raises two problems. There would continue to be a divorce between environmental and treatment services. While this would be disadvantageous, it would be a great improvement on the Minister's present proposals. If the regional principle be accepted there arises the question of what would happen to the local executive council. The Association approves the functions and composition of the local executive council, but to secure co-ordinated administration is of the opinion that it should operate on a regional basis.

12. The Association's view on this part of the Bill may be summarized by stating that effective functional integration can be secured only by concentrating local responsibility, administrative, financial, and other, at one level, and in the Association's view the appropriate level is the one selected for hospital services—the regional level. This regional integration is essential not only to efficient administration but in the interests of the public.

CENTRAL ADVISORY MACHINERY

13. While the establishment of a Central Health Services Council drawing members from all the main health professions with a majority of medical members meets the profession's views, the Association urges the Minister to make certain changes. It wishes particularly to stress the following points:

(*a*) The Council will give the fullest satisfaction only if its medical members are regarded as fully representative of the medical profession. It is desirable in the public interest to make impossible the appointment of medical

members who are unacceptable to the Minister or to the medical profession. For this reason the Association urges that the medical members should be appointed by the Minister in agreement with the medical profession, a nominee unacceptable to the Minister or the profession being rejected. In addition, there should be a small number of ex-officio members—e.g., the Presidents of the Royal Colleges and the Chairman of Council of the British Medical Association.

(*b*) The standing advisory committees of the Central Health Services Council, like the standing committees of other bodies, should report through the parent body, reporting to the Minister direct only in circumstances approved by that body, or in an emergency by its Chairman. The Central Health Services Council should itself appoint its committees, standing and other, and determine their terms of reference. Only in this way will the Central Health Services Council become a really effective body.

HOSPITAL AND SPECIALIST SERVICES

14. The Association joins with the Government in desiring a co-ordinated hospital service regionally administered over natural hospital areas, a policy which it has consistently urged in all previous discussions. It is impossible to judge the merits of the proposed hospital administration in the absence of detailed information on the composition of regional hospital boards and local hospital management committees. If such bodies are appropriately constituted, with adequate representation of the medical profession, of experts in the voluntary hospital field and, in the case of the regional boards, of the universities, the proposals may, from the administrative point of view, conform to the profession's repeatedly expressed desires. If, on the other hand, the representatives of local health authorities are to be placed in a majority on regional hospital boards or local hospital management committees, the proposals will be in direct conflict with the views of the profession. The Government is urged to embody proposals for the composition of these bodies, and of the boards of governors of teaching hospitals, in the Bill, and not to leave them to be dealt with subsequently by regulation.

15. The method of the group management committee, common in local authority organization, does not do away with the need for an individual committee of management. Accordingly, the Association urges the establishment for each hospital of a committee of management, to be responsible for its day-to-day administration in conformity with the plan of the regional hospital board, and a medical staff committee in close relation to, and represented upon, the committee of management.

16. On the subject of ownership, the Association recognizes that the Government's proposals raise serious issues which will be the concern of the public as a whole. The adoption of these proposals as they stand will inevitably involve a loss of local personal interest, and the discouragement of local support, whether in the form of contributions or of service. At present the local hospital, whether voluntary or council, commands a great deal of local pride, resource, and initiative, amounting sometimes to individual sacrifice for the community's good. Somehow or other these things must be preserved. These arguments for the preservation of the individual character and the local relationships of hospitals are not mere sentimentality. They bear closely, for example, on the hospital's capacity for innovation and experiment, its power to attract nursing and other staff and the confidence of the local people in their local hospital.

The Association has consistently pressed for an effective and appropriately constituted regional body with sufficient powers, financial and other, to secure the planned development of hospital services. In the Association's view the Minister should accept responsibility for all hospital provision and maintenance, voluntary and council, being advised on the allocation of the necessary centrally provided moneys by regional bodies. Such an arrangement would secure to the Minister and to the regional body all necessary power in the organization and development of the hospital service of its area, and it is unnecessary and undesirable for the Minister to proceed to assume actual ownership of hospitals, council or voluntary.

17. The Government's proposals might threaten private consulting practice despite the fact that the proposal of part-time service for some consultants is based on the assumption that private practice will be facilitated. The State, as owner of the hospitals, will control the private or semi-private accommodation and so will be free to convert private accommodation to semi-private accommodation and either to public accommodation when it so desires. In this way, and by its control of fees charged in private accommodation, it will control private consulting practice in so far as it is conducted in hospital premises. There will be scope for people to obtain additional amenities—e.g., private rooms where these are not medically necessary—by payment of the extra cost involved. But it appears that private accommodation will be restricted to particular hospitals where provision can be made "in separate parts of the hospital," and that the facilities will be limited to specialists taking part in the new service. This provision should not exclude the recognition of rooms and beds in the main hospital buildings as private accommodation. The Association is opposed to a restriction of the use of private accommodation of a particular hospital to specialists taking part in the new service.

In the public interest the conditions imposed should not be such as would lead or compel consultants or their patients to use nursing home or similar accommodation dissociated from the hospitals for private consultation and treatment.

Teaching Hospitals

18. The proposals for the administration of teaching hospitals can be judged only when fuller information as to the composition of the proposed boards of governors is known. It is not clear to what extent hospitals affording postgraduate clinical teaching and research will be regarded as teaching hospitals for the purpose of these arrangements. It is not clear what part the University Grants Committee will play in financing teaching hospitals. Only when fuller information is available can the proposals in relation to teaching hospitals be judged.

LOCAL CLINIC, DOMICILIARY, AND WELFARE SERVICES

19. The proposals under this heading have been the subject of comment in earlier paragraphs. The Association dislikes the proposals to place a statutory duty on local health authorities in respect of school medical and maternity and child welfare services, domiciliary midwifery, health visiting and home nursing services, vaccination and immunization, and a general ambulance service. Similarly, the Association is opposed to the proposal to place the responsibility for the provision and maintenance of health centres, dental centres, and similar premises upon the local health authority. The health centre no less than

the hospital should be the responsibility of the regional board. In the case of the ambulance service the case for regional organization is no less strong, for this, the committee believes, is the only way of bringing to an end the irritating limitations imposed by local authorities on the use of their ambulances outside their areas. These services should, in the Association's view, be administered, together with the hospital service, at the regional level.

FAMILY PRACTITIONER SERVICES

20. An objective from the outset will be the development of the health centre system. The profession is deeply interested in health centres—indeed, the general idea was first put forward by the profession itself. But it would be contrary to the public interest to proceed to a rigid health centre policy without widespread experiment into the merits and demerits of different types of health centre in different types of area. The Association suggests an immediate experimental investigation, under medical guidance, of health centres of varied types and functions. Some advantages, such as the organization of nursing and clerical facilities, the provision of premises specially built for the purpose, are obvious. Some disadvantages, particularly from the point of view of the public, are no less obvious. For example, patients will travel greater distances, they will suffer some loss of privacy, there may well be a loss of the personal touch. No details are given of the kind of health centre it is proposed to develop. The health centre outlined in the Coalition White Paper can be fairly described as an aggregation of doctors' consulting and waiting rooms, with common nursing and clerical help. This does not meet the real need. What general practitioners need, above all, is the provision of facilities for fuller diagnosis, with special emphasis on pathology and radiology. The extent to which such facilities can be made available in health centres should be a matter of widespread experimentation before the lines of central policy are laid down.

21. The building of health centres will take a considerable time. Pending their construction the effect of the Government's proposals will be not what it seeks, the encouragement of group medicine, but the opposite. The abolition of goodwill will of itself destroy the present basis of partnership agreements, breaking up partnerships into units of individual practitioners who may or may not reach arrangements between themselves. This may be still the case when health centres are in action. Further, no indication is given that the Government contemplates, in its proposed arrangements, the status of "assistant." It appears that all general practitioners in the proposed service, whatever their age or experience, will practise as individuals.

22. If the duty to provide and maintain health centres is vested in local health authorities, it will be difficult to avoid the present limitations of local facilities to the residents of particular local government areas. It is doubtful whether a health centre provided and maintained by one local authority would be available to the residents in an adjacent local authority area. This would involve some restriction of the patient's free choice of doctor. As has been urged in an earlier paragraph, the ownership and administration of health centres should be vested in the regional body.

23. The following statement was made by the Minister of Health in the House of Commons on Thursday, December 6, 1945:

"1. The Government have not yet finally decided upon the proposals which they will be submitting to Parliament for a National Health Service.

2. They believe, however, that it will be incompatible with the provision of an efficient service that the future exchange of medical practices and the creation of new practices within that service should be left entirely unregulated, and that no effective steps should be taken to secure a proper distribution of doctors to fit the public need.

3. I appreciate that intervention in this field, in whatever form it may take, will probably have the effect of preventing the sale and purchase of the practices of doctors taking part in the new service, and the Government therefore think it right to give warning of this probability at once and in advance of the formulation of their full proposals.

4. At the same time and in order to allay the natural anxieties of doctors already in practice, or coming into practice from the Forces or elsewhere, the Government wish to make it clear that there will be an appropriate measure of compensation to doctors in respect of loss of capital values directly caused by the new arrangements.

It is intended that discussions should be undertaken immediately with the profession's representatives with regard to the steps to be taken to give effect to this decision."

24. The Government proposes to control the distribution of doctors and recognizes that such control will destroy the selling value of practices wholly or partly in the public service. The method of control will be to require new entrants to the public service to apply to the local executive council, which will pass the application on to the Central Committee on the Distribution of Medical Practices, the decision as to whether the applicant is to be allowed to practise in a particular area being made by the latter body.

A central point of Government policy is the decision to achieve a better distribution of general practitioners by *control*. In the view of the profession such control is unnecessary and undesirable. An examination of the figures of the distribution of doctors in relation to population before the war shows, admittedly, an irregularity of distribution and some under-doctored areas. Generally speaking, these areas are not local government areas; usually they are pockets and not complete towns or counties. But it must not be thought that such irregularity merely exhibits a preference on the part of doctors for wealthier areas. For example, the ratio of general practitioners to population shows that Barrow-in-Furness, Darlington, and Macclesfield were in the years before the war provided with more doctors per thousand of population than Richmond, Rugby, or Winchester. When the age and health record of the local doctors has been examined, as it has been by the Central Medical War Committee during the war, it has been commonly shown that apparently over-doctored areas are, in fact, no better served in terms of medical man-power than apparently less well-doctored areas.

25. The introduction of National Health Insurance was briskly followed by a more even distribution of doctors. The introduction of a scheme available to the whole community will of itself exercise a very considerable influence in evening out medical distribution. The main problem which, in the Association's view, will remain unsolved by the introduction of a 100% service is the problem of the sparsely populated rural area. The method of extra inducement can and should be applied to solve the

problem of the sparsely populated area, as it can be applied—if experience shows it to be necessary—to other areas. In addition, the Minister could retain the powers given in Section 15 of the National Health Insurance Act, 1911 (and in Section 37 of the Act of 1936), enabling appropriate arrangements to be made in areas where medical service is inadequate. The profession will willingly establish an advisory machinery for helping to assist incomers to practice to select areas where the need is greatest. What it is opposed to as both unnecessary and undesirable is the form of negative direction proposed by the Government.

26. It was the Government's proposals for control which, because of their anticipated effect on the capital value of practices, led it to put forward proposals for compensation. Clearly there should be full compensation for any adverse effect on capital values occasioned by the Government's proposals. But, in the Association's view, the Government should not proceed with proposals to control the distribution of doctors if improved distribution can be secured without such control. If the "control" proposals are not proceeded with, it will be unnecessary to interfere with existing arrangements for the buying and selling of practices. The profession can and will make possible by its organization the entry or re-entry of demobilized practitioners to general practice under terms which are not onerous.

Clearly the proposal to abolish the buying and selling of practices is a crucial issue. Already the profession has expressed the view "that it is in the national interest and essential to the independence of the profession that doctors should continue to own the goodwill of their practices." The three proposals (*a*) to abolish buying and selling, (*b*) to institute basic salaries, (*c*) to control the distribution of doctors, considered either separately or as related parts of the plan, would take the profession much nearer the whole-time State-salaried service to which it is so strongly opposed.

27. It is understood that a substantial proportion of general practitioner remuneration will be derived from basic salary. The Association can find no justification for this proposal. It desires that the main, if not the only, element in general practitioner remuneration should be the choice of the individual doctor by the individual patient. The basic salary proposal, particularly if the proportion of the total remuneration is substantial, will lead to whole-time salaried service—something to which the profession is wholly opposed. It believes that in the future, as at present, there will need to be an appropriate proportion of assistants to principals in general practice, those assistants being employed by principals. It would be appropriate to establish agreed general salaries for assistants. It would be reasonable to require that a practitioner shall not become a principal in the new service until he had served for a prescribed period of time as an assistant. When he becomes a principal his remuneration should be related to the number of patients on his list.

28. If the Government proposes to pay basic salary only when a certain minimum number of patients have chosen the doctor, its proposal is superfluous. If it proposes to pay a basic salary to a practitioner entering the public service, however small the number of patients who are on his list, then the proposal is extravagant.

AMOUNT OF COMPENSATION

29. After discussion between the Ministry of Health and the Compensation Subcommittee of the Negotiating Committee the following letter was sent to the Minister:

March 8, 1946.

DEAR MR. BEVAN,

The Compensation Subcommittee of the Negotiating Committee has entered into discussions with the Ministry on the question of compensation, without accepting the policy from which the necessity for compensation arises. The medical profession is in no way committed to the policy of abolishing the custom of buying and selling goodwill. Indeed it has in the past expressed its opposition to this policy.

Important principles affecting the freedom of the medical profession are involved, and the amount of money offered by the Government in compensation is irrelevant. The Government's proposals must be considered as a whole and not merely in terms of finance.

The view of the Subcommittee is that if the Government persist in this policy, and Parliament approves, then the sum of £66,000,000 which the Government, after negotiations with the Subcommittee, now offers may, on the evidence available, be taken to represent the aggregate capital loss involved in respect of the goodwill of general practices.

The Compensation Subcommittee understands that this sum of £66,000,000—

(*a*) is based on the Government's estimate that 17,900 principals will enter the National Health Service;

(*b*) will not be subject to increase if in fact more than 17,900 principals so enter;

(*c*) will be subject to reduction if the number of principals so entering is below 17,700; the reduction for each principal in defect of 17,700 to be 1/17,900 of £66,000,000.

Yours sincerely,

(Signed) CHARLES HILL,

Secretary.

The Right Hon. Aneurin Bevan, M.P.

SOME OTHER POINTS

Civil Rights of Doctors

30. It should be secured in the Bill that doctors who participate in the National Health Service are not disqualified to serve as Members of Parliament, as members of local authorities and of any bodies concerned with the administration of the service, including regional boards, local hospital management committees, and local executive councils.

Industrial Medical Service

31. The exclusion from the scheme of the industrial medical service cannot be justified. The medical supervision of the worker at the factory should be linked with the supervision of his home environment as part of the same health service. Medical services in industry are of comparatively recent growth, and the opportunity should not be lost of integrating them with the main health service.

Specialists in the Public Health Service

32. While it is proposed to inaugurate selection committees for the appointment of specialists there is nothing in the Government's proposals to indicate that senior specialist officers in the Public Health service will be appointed otherwise than by local authorities.

Medical Research

33. No new proposals are advanced for the expansion and development of medical research. The facilities and resources for medical research should be greatly increased.

THE PROPOSALS AND THE PRINCIPLES

34. There are four of the profession's essential principles upon which the Government's proposals have a particular bearing:

PRINCIPLE I

The medical profession is, in the public interest, opposed to any form of service which leads directly or indirectly to the profession as a whole becoming full-time salaried servants of the State or local authorities.

35. The State will own all the hospitals in which consultants work, will appoint the governing bodies of hospitals, and, through regional boards, will employ the consultant to work in or from its premises, the consultant being employed on a whole-time or part-time basis. Whether the hospital proposals will lead directly or indirectly to consultants and specialists becoming "full-time salaried servants of the State or local authorities" will largely depend on the composition and functions of the regional board, the local hospital management committee, the board of governors of the teaching hospital, and the committee of management of the individual hospital.

36. General practitioners will be in contact with local authorities, half professional and half lay. At the earliest possible moment they will conduct their public general practices in premises owned and administered by a local authority. They will be remunerated in substantial part by salary. New entrants to public general practice will be appointed by a mainly medical body set up by the Government and working under its general direction. The Government's proposals, in the Council's view, will lead to general practitioners "becoming full-time salaried servants of the State or local authorities."

PRINCIPLE IV

Doctors should, like other workers, be free to choose the form, place, and type of work they prefer without governmental or other direction.

37. For the reasons set out in earlier paragraphs the Government's proposals are in conflict with this principle.

PRINCIPLE V

Every registered medical practitioner should be entitled as a right to participate in the public service.

38. The Government's proposals violate this principle. They contain no provision whereby a medical practitioner could claim the right to take part in the service somewhere. The local executive councils will consider not only the need for a new practice or replacement, but also the suitability of the applicant. The applicant, although recognized and approved by the General Medical Council, might therefore find himself or herself excluded from the service, either in particular areas or in every area.

The present proposals, in the Association's view, should be replaced by provisions similar to Sections 35 (2) (*b*) and 36 of the National Health Insurance Act, 1936. Section 35 (2) (*b*) secures a right on the part of any medical practitioner who so desires of being included in the lists of medical practitioners who have agreed to attend and treat insured persons. Section 36 is as follows:

"If the Minister, after such inquiry as may be prescribed, is satisfied that the continued inclusion in the list of any medical practitioner would be prejudicial to the efficiency of the medical service of the insured, the Minister may remove his name from the list."

PRINCIPLE VII

There should be adequate representation of the medical profession on all administrative bodies associated with the new service in order that doctors may make their contribution to the efficiency of the service.

39. The profession is promised medical representation on central advisory bodies, on regional boards, and on local hospital management committees. Although it is promised a majority on the Central Health Services Council, the composition of regional boards and local hospital management committees, as of boards of governors of teaching hospitals, is not known. Even though local health authorities are to be required to establish public health committees, there is not to be a requirement to co-opt doctors and other non-members of the authority with experience of the health services. Thus the Government's present proposals present some points of conflict with this principle.

PLAN FOR A HOSPITAL SERVICE

A few days before the appearance of the National Health Service Bill the British Hospitals Association published its plan for a national hospital service within a National Health Service. Briefly it proposes that voluntary hospitals should be retained alongside local authority (or State) hospitals, but working together in a service properly planned and organized over regions and centrally directed on a national basis. The Minister of Health would assume general responsibility for the direction and financing of the hospital service and would appoint, after consultation with the appropriate bodies, a central hospitals board, to which, subject to his veto, he would delegate major duties and responsibilities, including framing national policy. This board would be wholly or largely representative of doctors, voluntary hospitals, local authorities, dentists, nurses, and pharmacists. Regional hospital services would be planned by regional hospital boards, also appointed by the Minister, and each region would be associated with one of the medical teaching centres. The regional board would decide what services were required from each hospital in its area and have the necessary executive powers to ensure that its plans were carried out. These regional boards would be wholly or mainly representative of the interests concerned, including the universities. The individual hospital, through its committee of management, would be entirely responsible for the internal management and general conduct of its affairs. Voluntary hospitals would retain in trust their buildings and assets, but would receive payment from the State for services required and rendered. They would still be free to attract personal interest in their work and support for special purposes, for activities which are outside the scope of the national service, and for the general improvement of services, including the comfort both of patients and of staff.

In an introduction the British Hospitals Association states that the plan provides on a secure financial basis a comprehensive service free to the citizen, combining State resources with all that is best in existing services, including the voluntary hospitals. It maintains a balance between the organization required for a national service on the one hand and the obvious dangers in any national plan—loss of the personal and human touch and loss of local interest—on the other. The success of the voluntary hospitals has been chiefly due to their methods of direct management and to the widespread personal interest which they have attracted to their work.

APPLICATION OF NUTRITION TO PUBLIC HEALTH*

SOME LESSONS OF THE WAR

BY

H. E. MAGEE, D.Sc., M.B.

The war of 1914–18, and the food problems which then arose, more than any other event in the past 50 years focused attention on the importance of food for health. The stream of new knowledge of nutrition coming in increasing volume from research centres in different parts of the world after 1918 soon began to affect medicine in all its branches, especially public health. By the early 'twenties the discoveries in the physiology of calcium and phosphorus and of vitamin D were having effect on the prevention and treatment of rickets; by the end of the 'twenties the feeding tests of Corry Mann and of Orr and his colleagues[1] had demonstrated the high nutritive value of milk, and, by inference, many defects in the diets of large numbers of people. Those in charge of the public health were quick to apply these discoveries, and issues of preparations of calcium, vitamin D, and dried milk to mothers and children became a common practice in all welfare centres. The general body of the profession were not behind their colleagues in the public health services.

It had to be admitted, however, that the new knowledge of nutrition lacked wholeness, and required integration and synthesis of its various bits and pieces before it could be expected to impress those in control of the health of nations. It was appropriate, then, that this task should be taken up by the Health Organization of the League of Nations: first, because nutrition is of universal significance; and, secondly, because it is a health matter not to be dominated by other interests—agricultural, economic, or what not.

League of Nations Commission.—The Technical Commission of the Health Organization was the first international body of authoritative standing to make a comprehensive statement on the principles of nutrition. The Commission was succeeded by the Mixed Committee, which, in a series of reports, indicated the effects of the application of the new knowledge on the agriculture, economics, industry, and commerce of nations. It recommended the participating countries to set up national committees on nutrition, which would seek to put into effect the Commission's recommendations. In Great Britain a small expert committee of physiologists had been established by the Ministry of Health in 1931. It was succeeded in 1935 by a committee appointed by the Minister of Health and the Secretary of State for Scotland, representative of physiology, clinical and preventive medicine, agriculture, social and economic affairs, and statistics. The committee welcomed the report of the Technical Commission, expressed general agreement with it, and said that "the Commission has set up a new and high level of nutrition which we have adopted." This is noteworthy in view of the many statements made during the war that the standards of the Technical Commission were intended to be minimum.

Advisory Committee.—The Advisory Committee, through the machinery of the Agricultural Departments and the Board of Trade, accumulated statistics of home production and of imports and exports of food, and studies of the food consumption of families of different occupations in town and country were initiated or conducted by the Health Departments. The Ministry of Labour at the request of the Committee carried out a budgetary survey of several thousand families throughout the country. Much of the knowledge gained in these studies was published in summary form.[2] The budgetary survey made by the Ministry of Labour was published independently.[3]

War.—These studies were pursued as a purely peacetime activity without reference to war. When war broke out the information accumulated was of great assistance to those concerned with drawing up a food policy for war. Without this information the supply and distribution of food could not so readily have been placed on a scientific basis. The wartime food policy was, in fact, the first real try-out of the science of nutrition.

The Food Policy

Mode of Application of Nutrition.—In applying the science of nutrition the following five points had to receive attention. These are stated briefly and are illustrated by examples which indicate roughly how the wartime food policy was put into effect.

1. *Production of Vegetable Foods.*—Account had to be taken of differences in yield of nutritive value per acre for different crops. Potatoes and certain vegetables come high in order of yield, one acre of potatoes yielding, on the average, nearly 50% more calories than one acre of wheat, and one acre of cabbage yielding about as many calories as one acre of wheat. It was therefore very desirable to produce the maximum of potatoes and vegetables. People cannot, however, live on potatoes and vegetables alone, even in wartime, and the demands of farming practice had to be taken into account. In addition, potatoes and vegetables are our chief native sources of vitamin C, and it was likely that imports of fruit, which was an important source of vitamin C before the war, would have to be restricted.

2. *Production of Animal Food.*—First place had to be given to milk, well called the keystone of the nutritional arch. It was important to prevent production falling as in the last war, and even to increase it if possible. First priority in animal-feeding stuffs was therefore given to dairy cattle, and throughout the war production was fairly well maintained. Taking production in 1936–7 as 100, it was 101 in 1938–9 and 96 in 1944–5. Consumption, however, went up and up during the war, made possible by diverting more and more milk from manufacture to liquid consumption. Another important advantage in giving milk production priority over all other animal foods is that it provides a better return in human food than production of meat or of any other food of animal origin.[3a] The dairy cow, for instance, converts about 60% of the energy content of its food into energy in the form of milk and meat. The corresponding figure for the beef animal is about 10%; the figures for pigs and poultry are intermediate. Pigs and poultry, which feed mainly on cereal grains, are competitors with man for these foods; their numbers had therefore to be drastically reduced.

3. *Imports of Food.*—Important modifications in shipping were introduced to achieve the maximum importation of nutritive material in the limited shipping space available for food. Carcases of meat were telescoped, and later the bones were removed so that more could be packed into a given space; in the later years of the war some dried meat was imported. Shell eggs occupy much space in relation to nutritive value; by having them dried we were able to increase by many times the amount of nutrients in the form of eggs per unit of shipping space. For about the first year of the war imports of fruit were restricted to the orange, because, all things considered, the orange beat all competitors. Later, when the shipping position deteriorated still further, all imports of fruit had to cease.

4. *Integration of Food Supplies.*—In order to provide a balanced diet for the average person the schedules of production and of imports of all foods were integrated and collated with the varying needs of different sections of the population. Schedules of production and of imports were so arranged as to approximate as closely as possible the requirements of the population computed from nutritional standards. The relative steadiness of the rations of different foods throughout the war is eloquent testimony of the completeness with which the schedules of production and imports were fulfilled.

5. *Distribution of Food.*—In planning for distribution according to physiological requirements, the first step was to define the needs of special sections of the population and then to earmark allowances of appropriate foods to meet them. Those who had thus to be taken into account were expectant and nursing mothers, children, adolescents, heavy workers, and invalids. Having made provision for these categories, a fair division of the remaining foods amongst the whole population would, it was believed, meet the essential requirements of everyone. A cardinal principle was that rationing of bread and potatoes should be avoided if at all possible. Bread is the most important elastic reserve to cover variations in energy requirements, and so long as bread and potatoes remained unrationed there could be no real hunger. However much people may have complained about their food, one fact stands out above all others—no one during the war really suffered from hunger.

* The Milroy Lectures (abridged), delivered before the Royal College of Physicians, March 12 and 14, 1946.

The specific needs of mothers and children are constructive and protective nutrients. These were provided by the National Milk and Vitamin Schemes and by special priorities for eggs. School-children had the Milk-in-Schools Scheme, school meals, and half a pint (284 ml.) of milk daily delivered at home. Adolescents also had half a pint of milk at home, and they could obtain the national milk cocoa at their place of work. Many efforts were made to provide more for adolescents, but always the administrative problems involved were too complex. Heavy workers were able to obtain the extra food they required from their canteens; those who had not access to such canteens could obtain extra food at the British Restaurants. Agricultural labourers, miners, and certain other classes of heavy workers who could not obtain extra food from community feeding centres were given an extra ration of cheese. The special requirements of invalids were looked after by a committee of the M.R.C. Hospitals had special allowances of certain foods—e.g., milk, dried milk and eggs, and fish. Religious customs and the habits of vegetarians received due recognition. Finally, the ingenious "points" scheme made it possible for people to vary their diets somewhat according to taste.

Responsibility for Food Policy.—The planning, administration, and implementation of the wartime food policy was, of course, the responsibility of the Ministry of Food. The several other Government Departments concerned in one way or another with food were always consulted whenever major decisions were taken. The Ministry of Food naturally maintained particularly close contact with the Departments of Health and of Agriculture. The Ministry of Health, as the Department responsible for nutritional policy, had the special task of advising the Ministry of Food on the health aspects of food policy. The Ministry in discharging this task endeavoured to see that the nation was provided with a diet which would maintain health, stamina, and morale at a sufficiently high level to stand the strain of total war. The thesis I put forward is that this aim was in large measure achieved.

Departures from Desirable Levels of Consumption.—While the food policy in the main conformed to scientific principles, there were certain deviations from them, notably in regard to milk and bread.

Notwithstanding the National Milk Scheme and the other priority schemes for supplies of milk, consumption during the years of war was below what was considered desirable from the health point of view. The Advisory Committee reckoned that if everybody in Britain were to receive the desirable quantity of milk the overall average consumption would be about 0.88 pint (500 ml.) per head daily. The consumption in 1936–9 averaged 0.41 pint (233 ml.), in 1940–1 0.56 pint (318 ml.), and in 1944–5 0.66 pint (375 ml.).[4] Consumption was therefore three-quarters of requirements at the end of the war.

The bulk of the bread consumed till April, 1942, was made of white flour of about 68–75% extraction, which is almost devoid of protective nutrients. Bread of this sort has never met with the approval of experts in nutrition, but the activities of the enemy rather than scientific advice prevailed with the Ministry of Food. It was the dearth of ships rather than the arguments of the scientists which persuaded the Ministry of Food to raise the milling extraction rate to 85% in April, 1942. Many experiments by workers of the M.R.C. and of the Cereals Research Station, Ministry of Food, showed that this rate of extraction gave the maximum nutritive value of wheat with the minimum of indigestible residue. The lowering of the extraction rate to 80% in January, 1945, reduced appreciably the nutritive value of bread.

Effects of Food Policy on Food Consumption.—The Combined Food Board published global figures for foods moving into consumption up to 1943–4 and compared them with corresponding figures for 1934–8.[5] Important increases were: for potatoes, 45%; vegetables, 34%; milk and milk products, 28%; and grain products, 17%. Important decreases were in tomatoes and citrus fruits, 50%; other fruits, 44%; poultry and fish, 39%; sugar, 31%; meat, 21%; and fats, 16%. Eggs were down by only 6%, which may seem strange; the explanation is that the eggs were imported without shells and most of the water.

Nutrients Available for Consumption.—The amounts of nutrients available for consumption give a truer picture of the nutritional value of the national diet. It is important to note that the amounts published by the Combined Food Board[5] are those *available for consumption* and not necessarily the amounts consumed. Wastage of food was greater before than during the war, and there can be little doubt that many people consumed more food during the war than before it. There are no figures available; but figures would be an unnecessary refinement. The additional muscular exercise spent by large sections of the population in longer hours of work, more intensive effort, and other extra activities such as A.R.P., Home Guard, and allotment work required extra energy, which had to come from the food if wasting was to be avoided. There was no substantial or progressive decline in the weight of adults of either sex during the war, as the special body-weight survey of the Ministry of Food has shown. This survey was carried out on the same individuals—several thousands—at regular intervals from 1943. Therefore the increased output of energy must have been in the main balanced by increased consumption.

Since the estimates in the table are an overstatement of consumption, particularly for the pre-war years when wastage was greater, it follows that the actual increases in consumption during the war years are greater than the figures of the Combined Food Board would indicate, while the real decreases are smaller.

Calories show an apparent decrease of 130 per head daily, but, for the reasons just given, it is probably not real. Total protein was up by nearly 5 g., due mainly to increases of 4 g. in milk protein and 6 g. in cereal protein, but animal protein fell by nearly 3 g. Fats were down by 16 g., but calcium was up by 360 mg. because of increased consumption of milk and vegetable and the fortification of flour with chalk. The amounts of vitamins B_1 and C available for consumption were also increased—B_1 by 0.71 mg. and C. by 15 mg. per head daily. The increase in B_1 did not become apparent until 1942, when 85% extraction flour became compulsory. The worst year of all for food was 1941, and yet the figures show that the actual diet was little different from the pre-war one. Fat consumption was down by 18 g., vitamin C by 10 mg. protein was up by 2 g., calcium by 10 mg., and there was little change in the other nutrients.

Inequalities in Distribution.—The national diet as a whole was unquestionably better balanced during the war than before it, but it was important to know how it was distributed. For this purpose the Ministry of Food in late 1940 began to conduct systematic surveys of family diets on a large scale. The Ministry of Health gave much advisory and technical assistance in the conduct of these surveys. The results are still confidential, but it can be said that the distribution of different foods and the consumption of different nutrients are much more equal and more in accordance with requirements as between families of different income levels than before the war. This, of course, was achieved by rationing and priorities, by good wages, and by subsidies on staple foods.

The report of the survey of family diets made in the West Riding of Yorkshire in 1935–7 by Potts and myself[6] shows that consumption of many important nutrients was well below the desirable level—notably protein, calcium, and iron, and, there can be little doubt, in the important vitamins. Knowledge of the vitamin content of foods at that time was insufficient for a satisfactory calculation of vitamin consumption.

I am at liberty to quote some recent findings of the Ministry of Food's dietary survey. Compared with the intake of nutrients by the West Riding families in 1935–7, the diets of working-class families in 1944 were much superior. For instance, for all the Yorkshire working-class families the average consumption as a percentage of requirements was: calories, 99%; protein, 88%; iron, 94%; calcium, 41%; compared with 105%, 117%, 134%, and 79%, respectively, for the families of manual workers, of similar composition to the Yorkshire families, in the third quarter of 1944.

Decreases in Consumption.—The nutritive value of the wartime diet was also improved by the fall in the consumption of sugar, which was 31% less in 1943–4 than in 1934–8. An important consequence was that less carbohydrate was consumed which lacked corresponding amounts of the B vitamins for complete physiological oxidation. The B vitamins necessary for the oxidation of sugar must be drawn from other foods. The greater the quantity of sugar consumed the more is the balance of the diet likely to be upset.

Effects of Dietary Changes on Health

Towards the end of 1941 steps were taken by the Ministry of Health to obtain systematic and up-to-date information about the nutritional state of the population. The Chief Medical Officer arranged with the Rockefeller Foundation for Dr. Sydenstricker, of the University of Georgia, to spend a year in Great Britain making clinical surveys of the nutritional state. After Sydenstricker's departure his surveys were continued by other clinicians experienced in deficiency diseases. Systematic studies of the heights and weights of school-children were also made, and further information showing the effects of the war-time diet on health was obtained from surveys carried out by M.R.C. workers, local health departments, and others. Thus during most of the war the Government had under constant surveillance the total amounts of food available, the way in which it was distributed between families, the nutritional status of the population, the growth rate of children, and other information indicating how the public health was reacting to the changes in diet and the strain of war. One of the most conspicuous and surprising phenomena of the war was the way the health, vigour, and stamina of the population were maintained in spite of all the stresses, physical and mental, to which they had been subjected. Not everyone, it is true, was subjected in the same degree to the stresses of war, but no one could escape the general anxiety, the trials of the black-out, the harder work, and the lack of amusements. In addition, housing and the general environmental conditions were worse than they had been for years, and there were fewer doctors, dentists, nurses, and health visitors to attend to the needs of the people. Nevertheless, the general state of the public health during the war was in many respects better than before it.

Growth of School-children.—My colleague Dr. Bransby,[7] with the co-operation of the Ministry of Education and school medical officers, has been, since 1940, making systematic studies of growth in children in several parts of the country. In evacuation areas, like Liverpool and London, as well as in neutral and reception areas, heights and weights were higher in 1943 than those of children of the same ages in the same areas before the war. During 1940–1 there were in many areas small regressions compared with pre-war, but these generally had been more than made good by 1943. In a special study of about 18,000 children living at home, mainly in the evacuation areas but including a few neutral areas, the mean height was 1/4 in. (0.64 cm.) and the mean weight about 6 oz. (170 g.) greater in 1943 than in 1940. Bransby's[8] most recent findings are in Table I. They show consistent increases in the rate of growth of 0.1 to 1.5% in height and of 1.7 to 6.7% in weight in 1944 over the growth rates of children of the same ages in the same areas in 1938 and 1939. The improvement in growth rate was not confined to school-children, for Milligan and Lewis-Faning[9] found that infants in Glossop in the first year of life grew more rapidly in 1940–2 than before the war.

TABLE I.—*Average Percentage Increases in Growth Rate in 1944 over 1938 and 1939 for School-children in 21 Areas of Great Britain*

Age (years):		4	6	8	10	12	14
Height	Boys	0·4	0·1	0·8	1·1	0·7	0·6
	Girls	0·3	1·1	0·6	1·5	0·4	0·1
Weight	Boys	1·7	1·7	3·1	4·1	3·1	2·5
	Girls	2·9	1·8	3·8	6·7	2·1	2·9

Health of Mother and Child.—The results of important investigations carried out in recent years have done much to remove any doubts there may have been that consumption of adequate diets by the mother plays an important part in reducing the incidence of the ills and accidents peculiar to child-birth. The best evidence is of comparatively recent date, but many previous attempts had been made to throw light on the matter. Mellanby[10] in 1929 found that the puerperal morbidity of about 140 women receiving daily supplements of vitamins A and D during the last month of pregnancy was only one-quarter that of an equal number of women who received no supplement. Theobald[11] carried out a similar test on a group of 50 pregnant women; they were given, from the fifth month, daily supplements of calcium lactate and vitamins A and D. The incidence of symptoms of toxaemia—albuminuria, oedema, headaches, etc.—was less than half that in a control group of women. These and other similar tests[12] supported the conviction in the minds of many workers on this subject that improvements in the diets of pregnant women would go a long way towards reducing the morbidity and mortality of mother and child.

Toronto Test.—A comprehensive experiment was obviously desirable; such a one was carried out by Ebbs, Tisdall, and Scott.[13] They ascertained the diets of about 400 women in the fourth month of pregnancy in Toronto. The diets of 170 were found to be fairly good, and they were further improved by vigorous propaganda. The diets of the remainder were deficient in practically all the known nutrients; but for 90 of these women the defects were remedied by daily supplements of appropriate foods. The poor diet of the other 120 remained unchanged. Thus, for the last 4½ months of pregnancy, 260 women were receiving a well-balanced diet and 120 a diet deficient in most nutrients. The women and their babies were observed until 6 months after labour. During pregnancy the mothers getting good diets had better health, fewer complications—toxaemia, haemorrhage, miscarriages, premature births, stillbirths, and mastitis—and were, in general, considered to be better obstetrical risks than the women on the poor diets. The incidence of illness in the babies and the number of deaths during the first 6 months of life were much lower in the well-fed groups. For instance, 21% of the babies in the badly fed group had frequent colds and 5.5% had pneumonia, compared with 4.7% and about 1%, respectively, in the well-fed groups. The incidence of anaemia was also much higher in the deficiently fed groups.

People's League of Health Test.—A test with less attention to detail was conducted on about 5,000 pregnant women in 1938–9 in London under the supervision of a committee appointed by the League.[14] Half the women were given daily supplements of calcium, iron, iodine, manganese, copper, and vitamins A, B, C, and D for periods of not less than 16 weeks before delivery. The findings were a significantly lower incidence of toxaemia and of premature births in the supplemented group than in the control group.

Other Tests.—It was formerly the custom to treat women showing signs of toxaemia with a low-protein diet or even a semi-starvation diet. The evidence just quoted casts doubt on the soundness of the basis for this practice. Recent observations by Arnell *et al.*[15] make it even more dubious. They made observations on 400 pregnant women and found that 169 of them whose diets were much too low in protein—less than 54 g. daily—had lower haemoglobin and higher rates of general morbidity, of toxaemia, and of stillbirths than the remaining 231 women, whose diets were more satisfactory. Supporting evidence has been brought forward also by Burke,[16a] who kept dietary and clinical records of 216 women during pregnancy and the puerperium. The diets were rated "good," "fair," and "poor," and the incidence of toxaemia in the three groups was 0, 8%, and 44% respectively. The health of the babies was also graded, and it was found to be best in the "good" group. Stacey[16a] in a recent review says: "More deficiency states have resulted from this restriction than the good accruing from a liberal protein allowance in the diet."

Vital Statistics

Except for temporary setbacks in 1940–1, the maternal, infantile, and neonatal death rates and the stillbirth rate fell fairly steadily to the lowest levels ever.[17] There are, of course, other factors besides food which can influence these rates, but the general environmental conditions and the facilities for medical care had deteriorated rather than improved during the war. Vital statistics for the 1914–18 war were not nearly so good. Between 1914 and 1918 neonatal mortality showed little change (39 and 36 respectively); infant mortality declined from 104 to 98, but maternal mortality rose from 5.1 to 7.6. Unlike in the late war, environmental conditions had not deteriorated, but the diet had.[18] Table II shows the changes in consumption

TABLE II.—*Changes in Consumption of Certain Foods during the Two Wars compared with Pre-war*

	1918 *v.* 1909–13	1943–4 *v.* 1934–8
Milk	−26%	+28%
Eggs	−40%	− 6%
Meat	−27%	−21%
Vegetables	− 9%	+34%

of certain important foods during the two wars. The most important differences are for milk and vegetables. During the first war the consumption of milk *fell* by 26% and of vegetables by 9%; in the second world war milk consumption *rose* by 28% and vegetables by 34%. It is clear from these differences and from the others shown in the table that the national diet during the second war was far superior in constructive and protective nutrients to that during the first war.

Tuberculosis.—In regard to tuberculosis, the circumstances altered appreciably for the worse in the early part of the war. Many patients, who in peacetime would have remained in sanatoria, were sent home to make room for anticipated air-raid casualties. Many of these tuberculous people may have become infective after discharge, and the increase in the incidence of, and death rate from, tuberculosis in 1940–1 was not surprising.[17] The death rate was 635 per million in 1938; it had risen to 699 in 1940, but had reached the lowest level ever—583 per million—in 1944. The incidence was 50,689 in 1938, 54,300 in 1943, and practically the same in 1944. The increased incidence is unquestionably, to some extent, a measure of improvement in ascertainment rather than in real incidence. Ascertainment was improved by the medical examination of large numbers of young people for military service, and by the introduction of mass radiography.

Increases in the incidence of, and mortality from, tuberculosis during the war have been reported from some European countries. Debré[19] reported increased mortality rates of 38% to 74% in different districts of France in 1943, compared with 1935–8. The Institut National d'Hygiène[20] reported that the increased deaths were confined mainly to urban and industrial areas, and that in some rural areas the death rate actually declined during the war. There is evidence, the source of which I cannot quote, that the diets of rural people in the occupied countries of Europe were generally well balanced and rarely below about 2,600 calories per head daily, whereas urban people in the same countries usually had ill-balanced diets, which were often well below 2,000 calories per head daily.

Tuberculosis has always flourished where there is poverty or famine, and it is generally believed that poor food is the dominant factor. The European evidence just quoted and the striking differences between the death rates during the first and second world wars support this view. During the first world war the death rate from tuberculosis rose from 1,340 per million in 1913 to 1,694 in 1918, whereas it decreased during the second world war. In a recent review Leitch[21] has brought forward evidence indicating that diet plays a dominant part in maintaining the body's resistance against tuberculosis. There is therefore good reason to believe that the well-balanced diet during the war did a great deal to prevent increased mortality from tuberculosis.

Anaemia.—Before the war much attention was given to the incidence of anaemia among women of child-bearing age and young children, particularly of the poorer classes. The evidence of combined dietary and clinical surveys—e.g., those of Davidson, Orr, *et al.*[22] in Aberdeen, of Charles and Magee[23] in Newcastle-upon-Tyne—has not always revealed a clear-cut relationship between the incidence of anaemia and the iron content of the diet. The anaemia which prevailed responded readily to iron therapy and was relatively rare in the better-fed sections of the population. There was justification, therefore, for believing that the anaemia was due to insufficient consumption of some nutrients, of which iron was believed to be the most important. Other nutrients—protein, the haemopoietic factors, calcium, copper, cobalt, and vitamin C—are known to be concerned in blood formation, but they were considered to be less implicated than iron in causing the nutritional anaemia found in this country. The relationship of vitamin B to nutritional anaemia has been the subject of many investigations, but they have not led to a definite conclusion. Recent work by Spies[24] suggests, however, that folic acid plays an important part in haemoglobin formation.

There does not appear to be general agreement as to what exactly constitutes anaemia. To some, haemoglobin below a certain level, somewhat arbitrarily chosen, is the chief criterion; others attach as much importance to signs and symptoms such as dyspnoea and asthenia. Like other biological characteristics, the haemoglobin level varies from person to person of the same age, sex, and occupation, and the levels of a number of healthy people are always found to fall along a normal frequency-distribution curve. This was well brought out in the surveys of Price-Jones and others[25 26] in 1931 and 1935. They showed that the values for healthy men varied from 92% to 122% (Haldane). Since the subjects were healthy, we cannot regard 92% as any more abnormal than 122%, for a high haemoglobin is not necessarily a sign of health—it may mean quite the opposite. For instance, high haemoglobins are always found in polycythaemia, whether idiopathic or due to known causes—i.e., erythrocytosis. Anoxia is the normal stimulus to increased production of red cells, and this can arise from diminished oxygen in the air breathed, from pulmonary changes which impede the gaseous exchange in the lungs, or from impairment of the systemic circulation Thus, erythrocytosis with correspondingly high haemoglobin is found at high altitudes, in heart disease (particularly mitral stenosis), and in pulmonary disease—e.g., emphysema. At heights of 14,000 feet, and in cardiac and pulmonary conditions of the above types, red cell counts of 7 to 8 millions and high haemoglobin values have been found.[27]

Excluding such abnormal circumstances and conditions, variations of haemoglobin in healthy people may be explained to some extent by variations in the rate of blood-flow and in the efficiency of pulmonary aeration. The sedentary worker with sluggish circulation and shallow respiration may well require more haemoglobin than a person who lives a vigorous outdoor life. Price-Jones and his colleagues[26] thought that the higher haemoglobin they found in American men (112%) than in Englishmen (105%) might be due to breathing carbon monoxide, because all the Americans, but few of the Englishmen, possessed cars. Lack of exercise on the part of the Americans seems to me an equally plausible theory.

M.R.C. Haemoglobin Survey

The report of this survey of haemoglobin values[28] shows variations between occupational groups which seem to lend support to the above theory. Tables VII and VIII of the report show the highest levels in men whose occupations involve little muscular exertion, and the lowest in those in occupations demanding much muscular work. For example, amongst the highest values for single men were: police office workers, 112%, civil servants 108%, laboratory workers 105%; amongst the lowest were: workers in textiles 96%, locomotive builders 97%, agriculture 99%. Similar differences were noted amongst married men, but the occupational differences for women, married and single, although showing the same trend, were not so marked as for the men. Thus married women workers in textiles had a mean of 85%, in agriculture of 93%, while laboratory workers had a mean of 95% and civil servants of 97%. Differences in diet are an improbable causal factor; any advantages there may have been were almost certainly on the side of the industrial and agricultural workers rather than of the sedentary workers, most of whom lived in cities. These occupational differences in haemoglobin values may well be an expression, in an inverse sense, of bodily vigour. It is obviously desirable that the precise cause of occupational differences should be settled, in order to place our interpretation of haemoglobin values on a more satisfactory basis than at present.

M.R.C. Survey Results.—The survey was undertaken at the request of the Ministry of Health. About 16,000 people of both sexes and of different ages and occupations all over the country were surveyed during 1943. The Haemoglobin Committee placed the normal value for the adult male at 105%, but it was unable to arrive at normal values for women and children of different ages. The report suggests, however, that values in women and children below 70% should be regarded as indicative of anaemia, and values between 70 and 80% as suggestive of anaemia. The Committee concluded that there was less anaemia than before the war, particularly in women and children. Since the survey was completed further evidence of decrease in the incidence of anaemia has been obtained by Fullerton[29]; Dobbs, Mackay, and Bingham[30]; and Davidson.[31] It is difficult to conceive of any factor other than improvement in diet which could have produced such a remarkable change during the war.

Teeth and Gums

Teeth.—The dependence of the teeth on the nature of the diet for normality of structure and soundness is self-evident. Present teaching is that the diet of the mother during pregnancy and lactation is as important as that of the child itself after birth, for it would seem that the foundations of the teeth are laid *in utero*. Surveys of the condition of the teeth of 5-year-old children in East London were made in 1943 by Mellanby and Coumoulos[32] in the same schools in which Mellanby[33] had made a similar survey by the same methods on similar children in 1929. The teeth of the children in 1943 were found to be of sounder construction and to be less diseased than the teeth of their predecessors in 1929. Over one-fifth of the children in 1943 had caries-free teeth, compared with under one-twentieth in 1929. Reports of similar improvements have come from the School Dental Service. For instance, the Cambridge school dentist's report for 1944[34] shows steady improvement during the war in the dental condition of school-children. The percentage of teeth showing decay in 5-year-old children was 20 in 1936, 22 in 1938, 14 in 1942, and 11 in 1944. The returns for Glasgow[35] are even more striking. In 1938 only 18% of school entrants had mouths free from caries; in 1944 the proportion was 48%. It cannot be argued that this evidence of improvement was due to better dental hygiene; dentists were fewer and tooth-brushes were harder to get and more expensive than before the war. Then there were, particularly in London, the air raids and the disturbances and inconveniences they produced. It seems reasonable, therefore, to conclude that the improvement observed in the teeth of the children during the war years was due in no small measure to the better-balanced wartime diet.

One thinks naturally of the increase in consumption of calcifying factors—calcium and vitamin D—as the main cause of the improvement in the teeth of children, but it might be argued that decreased consumption of sugar was also a cause. Sugar consumption fell by about 9 oz. (253 g.) per head weekly compared with pre-war, but, for obvious reasons, there can be no certainty that the children actually consumed less sweets during the war. Moreover, King[36] has recently produced evidence showing that supplements of sweets (1.5–3 oz., or 42.5–85 g., weekly) or of chocolate-coated biscuits (2 oz., or 57 g., weekly) given to children aged 3 to 4 years for 6 to 24 months had no effect on the teeth. The supplements were eaten just before the children went to bed, and after they had cleaned their teeth with tooth-brush and mouthwash, so as to give the acid products of carbohydrate fermentation ample opportunity to attack the teeth.

Gums.—Shortly after the outbreak of war there was an increase in the incidence of gingivitis, especially in and around military camps, where it had sometimes the prevalence of a minor epidemic. It was very prevalent among Gibraltarians in London in 1941, and King, Francklyn, and Allen[37] obtained much success in treating them with a combination of local and systemic methods. Local treatment consisted in the removal of irritants and in the application of antiseptics; systemic treatment in the administration of niacin. King[38] has therefore put forward the hypothesis that lowered resistance due to nutritional deficiency, particularly of the vitamin B_2 complex, often, but not always, plays a part in the causation of gingivitis. He, and several other observers, did not find ascorbic acid to have any effect on gingivitis, even when combined with local treatment. On the other hand, Campbell and Cook,[39] and some others, claim to have found ascorbic acid effective, and believe that too low consumption of ascorbic acid is a causal factor. The evidence, on the whole, suggests that ascorbic acid is ineffective against the gingivitis commonly found in this country, and it would seem that the B_2 complex is more likely than vitamin C to be at fault in those cases of gingivitis which are of nutritional origin. The bulk of the gingivitis seen at present is apparently of traumatic origin, unless, as with the Gibraltarians and others early in the war, change in environment, dietary habits, occupation, and mode of life causes some unusual strain on the organism as a whole. In this event the rate at which the vitamins are used up may exceed the intake, which, under more normal conditions, would be sufficient for maintaining health (see King[38] for references).

Vitamins

Vitamin-feeding Tests.—During the war the notion prevailed in many quarters that concentrated preparations of vitamins—it did not seem to matter which one or ones—were a specific defence against war-weariness, anxiety, and strain, and that they were a tonic of particular value for what were called "war workers," but people not so classified were not considered to have any special need of them.

In 1941 a group of United States physicians generously provided the Ministry of Health with several millions of multi-vitamin capsules. With these, feeding tests were carried out on factory workers and school-children in 1941–2 and 1943–4. The first test was done on 1,242 school-children in London, Ipswich, Glossop, and a camp school, and on 214 men working in smelting furnaces; it lasted 6 to 12 months, half the subjects receiving one vitamin capsule on 5 to 7 days of each week. Each capsule contained about an adult's daily needs of vitamins A and D and of aneurin, riboflavin, niacin, and ascorbic acid. Since the national diet was thought to provide a sufficiency of all nutrients, including vitamins, the groups receiving the capsules were believed to be consuming the vitamins in excess of requirements to the extent provided by the capsules. Therefore the feeding tests were a trial of excess of vitamins, unless our estimates of their amounts in the national diet were over-optimistic. In this event, the vitamins, by making up the deficiencies would be expected to show some discernible effects. Inequalities in the nutritive values of the home diets were controlled by random division of the subjects, according to age and sex, into control and vitamin groups.

The second test was done in 1943–4 on 1,620 children aged 5 to 14 years in Stoke-on-Trent and Salford, and lasted for 12 months. The procedure adopted was the same as that in the first test. In the second test the diets of the children were specially surveyed. The results obtained showed no appreciable differences in the nutritive value of the diets between the groups.[40]

Results of Feeding Tests.—The results of both tests were similar.[41 42] In the factory workers the vitamin supplements were without effect on weight, haemoglobin, blood pressure, morbidity, or output of material. In the school-children the vitamins had no consistent effects on growth, strength, endurance, hearing, incidence or severity of a variety of clinical criteria, general nutritional state, or absence from school through illness. The vitamins had, however, an apparently beneficial influence, just statistically significant, on gingivitis in the Stoke children, but not in the Salford children or in the children or adults in the first test. Two considerations must be mentioned: (1) the vitamin groups of children in Stoke, *by chance*, had initially higher proportions affected with gingivitis than the corresponding controls; and (2) the beneficial influence was most apparent after the first three months, but was not fully sustained for the remainder of the test. In view of these facts of the absence of effect of the vitamins on the gums in the first test and in the Salford children in the second, it would not be justifiable to interpret the Stoke findings in other than a narrow and restricted sense.

Other Vitamin-feeding Tests.—The findings in the important vitamin-feeding tests done in recent years have been reviewed.[42] Only those carried out during the war in this country, where the basic diet was roughly the same, are strictly relevant. Weighing up all the relevant feeding trials with vitamin supplements, the results do not show any consistency. There can therefore be no certainty that large-scale additions of vitamins to our wartime diets would have improved their nutritive value. The decision of the Ministry of Health to resist the many requests to recommend the issue of vitamins as a prophylactic measure has therefore been justified. The decision was based on careful estimates made in the early months of the war—estimates which were an integral and essential part of the war-time food plans.

Vitamins as Therapeutic Substances.—Since their isolation and synthesis, the better-known vitamins have been used in curative medicine not only for the treatment of specific deficiency states—e.g., vitamin D in rickets—but also, and to an increasing extent, for their supposedly general tonic effects. In some instances, as in the use of aneurin for neuritis or sciatica, some

of certain important foods during the two wars. The most important differences are for milk and vegetables. During the first war the consumption of milk *fell* by 26% and of vegetables by 9%; in the second world war milk consumption *rose* by 28% and vegetables by 34%. It is clear from these differences and from the others shown in the table that the national diet during the second war was far superior in constructive and protective nutrients to that during the first war.

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Vitamins

Vitamin-feeding Tests.—During the war the notion prevailed in many quarters that concentrated preparations of vitamins—it did not seem to matter which one or ones—were a specific defence against war-weariness, anxiety, and strain, and that they were a tonic of particular value for what were called "war workers," but people not so classified were not considered to have any special need of them.

In 1941 a group of United States physicians generously provided the Ministry of Health with several millions of multi-vitamin capsules. With these, feeding tests were carried out on factory workers and school-children in 1941–2 and 1943–4. The first test was done on 1,242 school-children in London, Ipswich, Glossop, and a camp school, and on 214 men working in smelting furnaces; it lasted 6 to 12 months, half the subjects receiving one vitamin capsule on 5 to 7 days of each week. Each capsule contained about an adult's daily needs of vitamins A and D and of aneurin, riboflavin, niacin, and ascorbic acid. Since the national diet was thought to provide a sufficiency of all nutrients, including vitamins, the groups receiving the capsules were believed to be consuming the vitamins in excess of requirements to the extent provided by the capsules. Therefore the feeding tests were a trial of excess of vitamins, unless our estimates of their amounts in the national diet were over-optimistic. In this event, the vitamins, by making up the deficiencies would be expected to show some discernible effects. Inequalities in the nutritive values of the home diets were controlled by random division of the subjects, according to age and sex, into control and vitamin groups.

The second test was done in 1943–4 on 1,620 children aged 5 to 14 years in Stoke-on-Trent and Salford, and lasted for 12 months. The procedure adopted was the same as that in the first test. In the second test the diets of the children were specially surveyed. The results obtained showed no appreciable differences in the nutritive value of the diets between the groups.[40]

Results of Feeding Tests.—The results of both tests were similar.[41 42] In the factory workers the vitamin supplements were without effect on weight, haemoglobin, blood pressure, morbidity, or output of material. In the school-children the vitamins had no consistent effects on growth, strength, endurance, hearing, incidence or severity of a variety of clinical criteria, general nutritional state, or absence from school through illness. The vitamins had, however, an apparently beneficial influence, just statistically significant, on gingivitis in the Stoke children, but not in the Salford children or in the children or adults in the first test. Two considerations must be mentioned: (1) the vitamin groups of children in Stoke, *by chance*, had initially higher proportions affected with gingivitis than the corresponding controls; and (2) the beneficial influence was most apparent after the first three months, but was not fully sustained for the remainder of the test. In view of these facts of the absence of effect of the vitamins on the gums in the first test and in the Salford children in the second, it would not be justifiable to interpret the Stoke findings in other than a narrow and restricted sense.

Other Vitamin-feeding Tests.—The findings in the important vitamin-feeding tests done in recent years have been reviewed.[42] Only those carried out during the war in this country, where the basic diet was roughly the same, are strictly relevant. Weighing up all the relevant feeding trials with vitamin supplements, the results do not show any consistency. There can therefore be no certainty that large-scale additions of vitamins to our wartime diets would have improved their nutritive value. The decision of the Ministry of Health to resist the many requests to recommend the issue of vitamins as a prophylactic measure has therefore been justified. The decision was based on careful estimates made in the early months of the war—estimates which were an integral and essential part of the wartime food plans.

Vitamins as Therapeutic Substances.—Since their isolation and synthesis, the better-known vitamins have been used in curative medicine not only for the treatment of specific deficiency states—e.g., vitamin D in rickets—but also, and to an increasing extent, for their supposedly general tonic effects. In some instances, as in the use of aneurin for neuritis or sciatica, some

semblance of rational therapy might be argued, but more generally the underlying theory would seem to be—Since a little of the vitamins does some good then a lot of them will do more good. This is not to despise every therapy that is not based on physiological or pharmacological research, for the clinician cannot always wait on the results of the experimentalist. Indeed, many advances in physiology have originated in the successes and failures of the clinician. Scurvy, for instance, had been robbed of its terrors for sea-going folk long before vitamins had been heard of. Whether the administration of pure vitamins, in an irrational and blunderbuss fashion, is worth while is a question which the clinician must answer for himself. There are, however, some recent additions to our knowledge which may assist him.

Frankau[43] subjected groups of R.A.F. men to a test involving speed, stamina, and co-ordination. After giving each man 50 mg. of niacin, alone or with other vitamins, daily for a few days, the men performed the test with greater skill and efficiency. It should be noted that (*a*) the basic diet of the men was excellent, (*b*) the men were very fit, (*c*) the dose of niacin was four to five times the daily requirements, and (*d*) the effects became manifest after a few days. Borsook[44] gave 528 men working in an aircraft factory on every working day for a year 50,000 i.u. of vitamin A and correspondingly large amounts of vitamin D, riboflavin, niacin, ascorbic acid, and calcium. He found that work was more efficient and that absences through illness and other causes were significantly reduced. He calculated that each worker saved on an average 10½ days' work in the course of a year. In this test the workers were receiving a great excess of vitamins—to the extent of about 10 times the daily requirement. Frankau believed that the effects of niacin in her tests were pharmacological; very probably those described by Borsook were of the same order.

Ultimate Effects of Excess of Vitamins.—The public health specialist is entitled to ask what the ultimate effects would be on the health of men and women taking vitamin supplements at high levels for the whole of their lives, and on the health and development of their children. Many are of the opinion that, short of colossal doses, vitamins can do no harm. Some recent researches, however, cast doubt on the wisdom of this notion.

Richards[45] found that the addition of a small supplement of aneurin to rats fed on a diet low in the B complex vitamins, but not so low as to cause signs of deficiency, produced unmistakable evidence of deficiency of other factors of the B complex in the next generation, but not in the parent rats. These findings have, in general, been confirmed by Pett *et al.*[46] Leitner,[47] after treating two patients for some time with large doses of B_1, found that one developed symptoms of thyrotoxicosis and the other of anaphylaxis. Foster *et al.*[48] found that mice fed on adequate diets supplemented with aneurin became more susceptible to poliomyelitis virus than controls.

Nutritional Status

The systematic clinical surveys which the Ministry of Health has been conducting since 1942 give a picture of the nutritional state of the public as a whole.[49 50 51] These have shown that the general standard of nutrition of the population has been maintained at a high level during the war. It is remarkable that, after six years of rationing and of war, out of 20,235 people examined only 9 were found to show evidence of deficiency disease, only 0.7% were of "poor," and only 10.5% of "fair" nutritional state. The returns of the Ministry of Education support this evidence; the percentage of children for England and Wales found to be below normal was 11.3 in 1938 and 9.7 in 1944.

The systematic surveys were conducted by Dr. Sydenstricker in 1942, using the procedure developed by him in the U.S.A., and later by Drs. Hawes, Stannus, Adcock, and Fitzgerald, all of whom had had much previous experience of deficiency disease. All possible care was taken to ensure uniformity of method and of standards. Frequent consultations on the same subjects took place from time to time, and two clinicians usually worked together. The procedure consisted in a search for evidence of deficiency disease and then of an assessment of nutritional status—the slit-lamp, special tuning-fork, and other clinical aids being used.

The clinical method has its critics, but there is none other which would serve the purpose the Ministry had in mind. The other procedures that have been suggested are anthropometry and biochemical and physiological measurements. These can be regarded only as adjuncts to the clinical method; for by themselves they tell us little. The reports of nutritional surveys of undernourished people in Europe that have come to hand, many including biochemical analyses, seem to have been singularly unproductive on the basis of the biochemical results alone; the clinical findings, on the other hand, were always of value. The time is not yet ripe for full discussion of this difficult subject, and it is to be hoped that the reports of the European and Eastern experiences, when they become available, will help to solve some of its many problems.

Two clinical conditions—follicular keratosis and corneal vascularization, the one observed frequently, the other rarely, in clinical surveys—require further discussion.

Follicular Keratosis

Follicular keratosis, or folliculosis, is found in as high a proportion as 30% of older school-children and adolescents, less frequently in younger children, and rarely in children under 5. The presence of the condition bears no apparent relation to the general nutritional state. It is found frequently in healthy adolescents of both sexes, particularly in girls; it is very common in children leading a healthy open-air life, and is seen more often in winter than in summer. Female adolescents in a sausage factory showed no evidence of the condition, whereas a high proportion of girls of the same age in factories in the same district were affected. This suggested that the presence of animal fats on the skin prevented the development of the condition. Hawes and Stannus then conducted feeding tests lasting for three months or more on several hundreds of children and adolescents in institutions and schools. They used preparations of vitamin A in high concentration (so as to avoid possible effects of fatty acids), ascorbic acid, nicotinamide, pantothenic acid, and a special preparation of maize oil rich in unsaturated acids considered to be essential—viz., linoleic and linolenic acids. These were given by mouth in the following doses: vitamin A, 10,000 i.u.; ascorbic acid, 50–100 mg.; nicotinamide, 50 mg.; pantothenic acid, 50 mg.; and maize oil, 0.75 ml. per day. No definite effect could be attributed to any of the substances, but maize oil in some cases seemed to cause a softening and diminution in size of the follicular projections. Pantothenic acid seemed to have a slight effect on the follicles in some cases, but none of the other substances had any discernible action. Vitamins A and C were given very extensive trials, but no effect of any sort was observed. Deficiency of vitamin A or vitamin C was evidently not the cause. Stannus[52] has suggested that the condition is not nutritional in origin, but is identical with keratosis pilaris or lichen pilaris, which is generally believed to be unimportant. Zieler[53] says of it: "Das Leiden hat keine besondere Bedeutung (Schönheitsfehler)"—a "beauty blemish," is all he thinks of the condition.

In Stannus's view the follicular keratosis, or phrynodermia, said to be pathognomonic of vitamin A deficiency is nothing more than an exaggerated and more generalized keratosis pilaris, which by itself means nothing in a nutritional sense.

Corneal Vascularization

The earlier view that corneal vascularization is pathognomonic of riboflavin deficiency has been shown to be too sweeping—just as much so as the inferences drawn from defective dark-adaptation relative to vitamin A deficiency in the early days of that technique. Ariboflavinosis has been reported in as high a proportion as 99% of subjects examined.[54] Subsequent observations by a number of workers have made it clear that the corneo-scleral junction is not avascular, as was formerly thought, and that the pathological pattern of the vessels is not easy to distinguish. Deficiency of riboflavin is not the only cause of vascularization of the cornea; exposure to bright light, heat, and cold also cause it. The subject was discussed by Stannus in his Lumleian lectures[55] and by Ferguson.[56] Both are of the opinion that vascular changes in the cornea due to riboflavin deficiency are rarely encountered in this country at present.

Intravenous Alimentation

The theoretical basis of intravenous alimentation is quite rational. It consists in the administration by vein of sufficient metabolizable nutrients to keep the body going and to repair damaged tissues when the body is unable to absorb food taken by mouth. The treatment would seem to be indicated in any condition in which absorption of enough nutrients cannot be achieved. There would seem, however, to be an overriding condition for the adoption of treatment—viz., the circulating blood should be of sufficient volume and rate of flow to sweep away rapidly the injected material, so as to obviate local accumulation and thrombosis. Until about 1938 intravenous alimentation was confined almost entirely to the administration of glucose and saline solutions. Elman and Weiner[57] first reported the use of protein hydrolysates for the treatment of patients suffering from inanition arising out of, or as a complication of, a variety of pathological states. In 1943 Elman and Lischer[58] reported much success for the treatment in several hundred cases. Elman claimed that his preparation rarely if ever caused reactions, but the same could not be said of other preparations, most of which gave rise to reactions of an anaphylactic type. The subject has been reviewed by Elman,[59] Gaunt,[60] and Cuthbertson.[61]

The most successful of all the American preparations is amigen. The British preparations for intravenous use are made by hydrolysing casein with sulphuric acid. This breaks down the tryptophan which has to be added to ensure the "vollwertigkeit" of the preparation. Sometimes supplements of cystine and methionine are also added.

Scope for extensive use of these preparations seemed likely to develop with the prospect of starvation in Europe at the end of hostilities. In starvation there is progressive failure of digestion and absorption, and, when the stage of dehydration is reached, both of these functions would seem almost to have ceased because of degeneration of the intestinal mucosa.[62 63] It is then that intravenous alimentation appears to be most appropriate, if for no other reason than that food of any sort given by mouth to people in such a debilitated state tends to increase the diarrhoea and dehydration. In the German horror camps, after liberation, a number of people were treated by intravenous alimentation, but the results were far from being uniformly good. The treatment evidently met with greater success in the Bengal famine of 1943.[61] Doubtless lack of adequate nursing was a cause of failure, as Vaughan and others[64] have pointed out, but many of the subjects were evidently unsuitable. A circulation of sufficient vigour to ensure rapid dispersal of the nutrient fluid throughout the body and the prevention of local thrombosis is evidently indispensable for success. For this reason, restoration of the circulation by transfusions of plasma, serum, or whole blood would seem to be an essential preliminary to the adoption of intravenous alimentation in starving people.

A few repatriated prisoners of war were treated with protein hydrolysates in England in 1945 with some, but not spectacular, success. Although no untoward reactions were reported, thrombosis of injected veins occurred in every case.

Conspicuous by contrast is the success of treatment with amigen in the U.S.A. A recent paper by Brunschwig and others[65] provides an example. They kept alive a man aged 50, who had had two major operations, for 56 days on amigen and glucose by vein; no other nourishment of any sort was given. The man recovered completely. A fully satisfactory preparation could probably be put to wide clinical use. Treatment should obviously be restricted to persons unable to absorb food taken by mouth, and it should give way to ordinary feeding as soon as there is reason to believe that absorption is restored.

Oral Hydrolysates

An enzymic digest of protein not so fully broken down as the acid hydrolysate was also used in Europe for the treatment of starvation.[66] Little success was obtained. There are two objections to these semi-digested preparations. The first is that the stuff is too nauseating, and the second that there is no physiological basis for such a half-way measure between ordinary feeding on the one hand and intravenous feeding with metabolizable nutrients on the other. For anatomical reasons impairment of digestion is hardly conceivable without impairment of absorption. Therefore, if a patient cannot digest food he is not likely to be able to absorb it either.

Summary and Conclusions

The wartime food policy was the first large-scale application of the science of nutrition to the population of the United Kingdom. This application was brought about by home production and importation of suitable foods in suitable amounts, by rationing according to needs, by subsidies on staple foods, and by adequate wages. A diet more than ever before in conformity with physiological requirements became available to everyone, irrespective of income.

The other environmental factors which might influence the public health had, on the whole, deteriorated under the stress of war. The public health, so far from deteriorating, was maintained and even in many respects improved. The rates of infantile, neonatal, and maternal mortality and the stillbirth rate reached the lowest levels ever. The incidence of anaemia declined, the growth rate and the condition of the teeth of school-children were improved, and the general state of nutrition of the population as a whole was up to or above pre-war standards. We are therefore entitled to conclude that the new knowledge of nutrition can be applied to communities with the expectation that concrete benefit to their state of well-being will result.

The national diet showed, however, some significant departures from physiological requirements, especially with respect to milk and bread. Consumption of milk was not more than about 75% of the desirable amount. In regard to bread, the defect was removed by the adoption of a higher milling ratio of wheat in 1942. The subsequent lowering of the ratio reduced the nutritive value of bread, but, so far as our present knowledge goes, the 80% ratio is about sufficient to ensure enough B vitamins for the metabolism of carbohydrate in bread. It is, however, questionable if it would suffice for the metabolism of additional unbalanced carbohydrate, such as would follow a large increase in the consumption of sugar, unless consumption of other vitamin-B-rich foods—e.g., milk and eggs—were correspondingly increased.

If we are to retain what has been achieved during the war we must see that the quality and quantity of our agricultural produce and imports are determined primarily by health requirements and that, when, in the fullness of time, free choice of food returns, the public are made aware of the dietary requirements for health. Steps should also be taken so to arrange our social and economic affairs as to make it possible for everyone to secure a diet sufficient for his needs.

The need for up-to-date information about food distribution and the nutritional state of the public will continue. Accordingly, surveys of food consumption and of the nutritional state of samples of the population should be carried out from time to time. The technique of dietary surveys is now fairly well established, but that for surveys of the nutritional state is much less satisfactory. More research requires to be done, involving laboratory and clinical studies, therapeutic tests, and feeding tests. Among subjects worthy of study are the significance of haemoglobin levels, and of a variety of commonly occurring signs and symptoms of a minor order, such as gingivitis, pityriasis sicca, and corneal vascularization, and the relationship of diet to the incidence and progress of disease, including dental disease. The perfection of preparations of protein hydrolysates and of the technique of administration would open up a wide field for their use in curative medicine.

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TREATMENT OF CHEST WOUNDS IN FORWARD AREAS

A REVIEW OF 100 CASES

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Chest wounds comprise a considerable section of the injuries of war, and the importance of their early treatment is now clearly recognized. A series of 100 consecutive cases treated in a casualty clearing station (C.C.S.) is reviewed.

Statistical Survey

Undoubtedly many chest casualties die on the battlefield, and further deaths occur before surgical aid is available. Those surviving at C.C.S. level represent a varying proportion of the total casualties admitted, as shown in Table I. Of the 220 cases analysed the 100 reviewed in this article were all dealt with by one surgical unit.

TABLE I.—*Analysis of 220 Cases*

	Gunshot Wounds	Shell Wounds	Mortar Wounds	Bomb Wounds	Grenade Wounds	Mine Wounds	? Missile	Total	Total Admissions	% of Total
July ..	19	10	28	—	—	—	—	57	905	6·3
Aug. ..	15	9	20	—	—	—	1	45	611	7·3
Sept. ..	16	4	6	—	1	—	3	30	424	7·0
Oct. ..	20	30	6	2	—	2	3	63	1,096	6·0
Nov. ..	3	10	2	—	2	2	1	20	560	3·5
Dec. ..	3	1	—	—	—	—	1	5	428	1·2
Totals..	76	64	62	2	3	4	9	220	4,024	

July, August, September, and October were active battle phases when an attached field dressing station filtered off light and walking wounded, passing only the more serious cases to the C.C.S. During this period the incidence of chest wounds was in the region of 6.6%. In November there was a fall to 3.5%, due to seasonal increase in medical cases. In December the C.C.S. took casualties without filtration, and the rate was only 1.2%. The overall rate, including the numbers filtered off, for the period July to December was 2.7%. This is an increase of 40% over comparable figures for the last war (War Office Publication, 1944), and may be due to such factors as improved first aid, more rapid evacuation, and higher priority in treatment.

The proportionate incidence of wounds due to various causative agents changed during the progress of the campaign. In Normandy mortar wounds accounted for a relatively high proportion. During the advance into the Low Countries small-arms wounds were predominant. In November and December, when contact with the enemy was limited to patrols, shelling accounted for most of the wounds. Aerial bombs, mines, and grenades did not at any time cause many casualties. There was no instance of wounding by bayonet or knife.

Types of Wounds.—Chest wounds are of four types. The non-penetrating wound does not enter the pleural cavity; the penetrating wound has an entry only; the perforating wound traverses the chest, with entry and exit. In the thoraco-abdominal or abdomino-thoracic injury the same missile passes either through the chest into the abdomen or in the reverse direction. Any of these types penetrating the pleura may give rise to a sucking wound.

First-aid Treatment

Treatment begins on the battlefield. The stretcher-bearer's work demands brawn more than brain, but with a little training he is capable of doing a great deal for chest casualties. The marked dyspnoea caused by a penetrating chest wound is easily recognized; the stretcher-bearer may be able to plug a large sucking wound with a field or shell dressing. Distress and anxiety should be relieved by morphine, and the stretcher-bearer can give 1/4 gr. (16 mg.) intramuscularly into the thigh or shoulder by means of a "syrette." Subcutaneous administration is of little value, since peripheral circulation in chest wounds is quickly impaired and absorption from the tissues delayed. All patients with chest wounds should be stretcher-borne, preferably with the head and shoulders elevated by a high cushion of blankets or clothing.

When the patient reaches the aid post the regimental medical officer is able to examine the wound more carefully and apply the proper dressing. As many wounds begin to suck at a later stage it is safer to treat every penetrating wound as a potential "sucker." The skin around the wound is cleaned of blood and sweat, and a pad of vaselined gauze, plugged into the wound if necessary, is covered with a field dressing and held firmly in place by a generous application of adhesive strapping, which completes the seal. Elastoplast is unsuitable because it tends to stretch and "sweat off." If the patient has not yet had morphine it should now be given by the medical officer—intravenously, if possible.

The principles of first-aid treatment adopted by the R.M.O. also hold in the field ambulance. Dressings, if still satisfactory, should not be disturbed, and the average patient, after a short rest, is able to continue his journey to the C.C.S. If dyspnoea continues to be severe it may be due to persistence of "suck." For the majority re-dressing may suffice, but for large wounds this may be inadequate. In these circumstances the skin edges can be approximated by a single suture over a vaselined gauze pack. This is a temporary measure only, to enable evacuation to the C.C.S., where normal surgical procedure then takes place. Where respiratory distress is severe and respirations are shallow, oxygen by B.L.B. mask is of value. If it is necessary at the field ambulance it should be continued during the journey to the C.C.S.

Transfusion for chest injuries at field ambulance level is of debatable value. Transfusion produces its best results when closely allied to surgery, and if the patient is transfused forward the improvement in his general condition is usually nullified by the journey to the C.C.S. Pre-operative transfusion in these cases is then found to be more difficult, and the patient responds more slowly than he would if he had been evacuated without

preliminary transfusion. It is permissible if evacuation is delayed or the journey is a long one, but such circumstances were rare in this campaign.

Pre-operative Treatment and Diagnosis

On arrival at the C.C.S. the patient is admitted to the resuscitation ward and propped up on a back-rest. Enough clothing is removed to allow a rapid but careful scrutiny of the chest wall. Some wounds are now found to be sucking, either because the dressing has become loose or because "suck" has developed in a wound which appeared closed at the field ambulance; these require immediate sealing. Traumatic emphysema may be present. It indicates a penetrating wound, and may be extensive, causing gross swelling as far as the neck and face and extending down the abdominal wall to the groins. It is often associated with a small skin-entry wound. Evidence of pneumothorax must now be sought. The most helpful signs are displacement of the apex beat and deviation of the trachea. Tension pneumothorax is uncommon, but must be excluded. It is rarely seen at the C.C.S., only two cases having been observed in over 5,000 admissions. Cases have, however, been reported from forward areas, and it is possible that this may account for some deaths soon after wounding. Tension pneumothorax results from leakage of air from terminal bronchi and bronchioles into the pleural cavity, whence there is no escape to the exterior. The condition is progressive and treatment urgent. A wide-bore needle is inserted into the second interspace anteriorly and a one-way flow provided by reversing the air-inlet valve of an Army pattern transfusion set.

During rush periods routine radiography is not possible. Some indication of the route of the missile can be gained by an appreciation of the position of the patient relative to the bomb or weapon which injured him. The value of early radiography lies mainly in a knowledge of the final position of the foreign body. Skiagrams of the chest and abdomen should always be taken when there is a possibility of thoraco-abdominal injury. It is not necessary in through-and-through wounds.

Diagnosis of thoraco-abdominal injury may present considerable difficulty. Chest wounds alone can cause abdominal rigidity and sometimes abdominal pain, either from irritation of the diaphragmatic pleura or from spinal or intercostal nerve involvement. Rigidity in a penetrating abdominal wound can be variable, depending on the extent of haemoperitoneum or bowel injury. Clinical differentiation of thoraco-abdominal from pure chest injury may be impossible on purely clinical grounds, and in cases where radiological evidence is not conclusive the final diagnosis may be possible only at operation.

Transfusion

For statistical purposes the cases under review have been divided into four groups: (A) Penetrating and perforating chest wounds uncomplicated by other major injury. (B) Penetrating and perforating wounds with associated major injury. (C) Thoraco-abdominal wounds. (D) Non-penetrating wounds of the chest with or without associated major injury.

TABLE II.—*Numbers of Cases Transfused in Different Groups*

Group	Total Cases	Transfused	Total Blood (pints)	Total Plasma (pints)
A	23	4	11	2
B	37	19	47	12
C	22	18	60	7
D	18	9	23	4
Totals ..	100	50	141	25

Of the 100 cases, 50 were transfused with an average of 3.3 pints (1.9 l.) of protein fluids. The proportion of blood to plasma used was in the ratio of 11 to 2. Of the four cases transfused in Group A, two had severe intercostal bleeding, each requiring three pints (1.7 l.) of blood, one previously having had two pints (1.14 l.) of plasma at a field ambulance. A third, with a fractured sternum, had one pint (568 ml.) of blood only. The fourth was critically ill on admission, and, despite transfusion with four pints (2.27 l.) of blood, died suddenly during induction. In Groups B and D transfusion rates are similar—an indication that transfusion was required mainly on account of associated injury. This is borne out by the low transfusion rate in Group A. The fact that 18 cases out of 22 in Group C were transfused is merely an indication of the high incidence of involvement of liver, spleen, and kidney in thoraco-abdominal injuries. Group D includes two known cases of blast-lung. In theory such cases should not be transfused, but since they had very severe associated injuries it was felt that transfusion should not be withheld, for without it they had no chance of recovery.

Transfusion of cases with intrathoracic injury has until recently been regarded with disfavour. It was argued that overloading of the right heart and pulmonary oedema might result and that bleeding from the lung might increase. This has not been observed even in cases receiving as much as seven pints (4 l.) of blood. The response to transfusion does not seem to differ from that in any other type of injury. Transfusion of two to three pints (1.14–1.7 l.) at the rate of 15–20 ml. a minute appears to be well tolerated.

Operative Treatment

No operative intervention is necessary in small penetrating wounds which are not sucking, and these cases may be passed direct to the physician.

A few cases reach the C.C.S. *in extremis*. This may be accounted for by intrathoracic haemorrhage due to hilar or mediastinal damage, but more often inspection shows that because of its site or extent closure of a sucking wound has not been effective. The urgent need is stressed for closure of the wound as a primary measure. Insertion of muscle sutures without an anaesthetic may be necessary before attempting resuscitation. These cases have operation priority second only to severe uncontrolled haemorrhage, and take precedence over all else in the resuscitation ward.

Cases requiring operation have lacerated wounds with comminution of the adjacent ribs. Bleeding is often profuse, and may originate from intercostal or internal mammary vessels and less often from lacerated lung tissues. Operative procedure in the C.C.S. is essentially minimal. In cases with associated injuries the penetrating chest wound is dealt with first. Under gas-and-oxygen anaesthesia the wound edges are excised and devitalized tissues and rib fragments removed. Rib ends are trimmed beyond the edges of healthy pleural tissue so that no possibility remains of subsequent laceration of the lung. Any intercostal haemorrhage is dealt with by a through-muscle suture. The anaesthetist then expands the lung so that the injured area presents in the wound. Lacerations can be sewn up and bleeding controlled, but interference with lung tissue is rarely necessary. Foreign bodies, if readily accessible, are removed, but systematic searching is unwise, since it tends to embarrass still further a mechanically laboured respiration. Possible exceptions to this rule are foreign bodies known to be in the region of the hilum or pericardium. The pleural cavity is then sucked dry and 50,000 units of penicillin introduced in 5–10 ml. of normal saline. The wound edges are dusted with penicillin–sulphanilamide powder and, with lung expansion maintained to the full by the anaesthetist, the pleura is closed—separately, if possible, but generally by incorporation with muscle tissue. Careful approximation of muscle layers is essential to prevent further leakage. Where there is extensive tissue loss it may be necessary to swing a flap of muscle from the pectorales or the latissimus dorsi to obtain closure. When cases can be held at least six days, suture of the skin is permissible.

Thoraco-abdominal Wounds

The incidence of thoraco-abdominal wounds to total chest wounds has been given variously as from 6 to 14%. In this series the figure is 22%. The difference is explained by the transference in Normandy, where lines of evacuation were short, of uncomplicated penetrating chest cases back to base for treatment.

Expectant treatment is the normal procedure where the skiagram shows a small foreign body lodged in the liver from a right-sided chest wound, and no attempt should be made to remove it. In the majority of cases the wound of entry is in the lower chest, the tract proceeding horizontally through the diaphragm and involving upper abdominal organs. In some it is directed downwards and may injure any of the abdominal contents. The operative approach depends on the site of the entry wound. As diagnosis is often confirmed by following the track of the wound it is generally expedient to use an incision

starting at the point of chest entry, running downwards and forwards towards the upper abdomen along an intercostal space. By this approach exposure of the diaphragmatic wound and left upper abdomen is adequate, and many forward surgeons have commented on the ease with which splenectomy can be carried out by the transthoracic route. Further advantages are easy repair of the diaphragm and the avoidance of confirmatory laparotomy in doubtful cases where the peritoneum is found to be intact.

In the series under review there were 22 cases of thoraco-abdominal injury. One case was treated expectantly and 21 were submitted to operation. The principal abdominal organs involved were: liver (11), spleen (7), kidney (7), stomach (3), jejunum (2), and colon (1).

Post-operative Treatment

The post-operative treatment of chest wounds is carried out by the physician. Haemothorax or haemopneumothorax persists in the majority and treatment is largely guided by radiological control. Until some two years ago the initial aspiration was delayed up to four days, and even this was considered to be setting the pace. Present opinion and experience indicate that early aspiration, even on the morning following operation, is advisable, and amounts of up to two pints (1.14 l.) of blood-stained exudate have been aspirated without undue distress. Air should always be aspirated first, for in some cases where this was delayed difficulty was experienced in obtaining complete re-expansion of the lung. Aspiration of fluid is then repeated daily or on alternate days until the chest is dry. After aspiration, 50,000 units of penicillin are introduced into the pleural cavity every two days. Absorption by the pleura is slow, and penicillin concentration is maintained at a relatively high level. It is stated by d'Abreu *et al.* (1944) that one to five units per ml. of fluid aspirated have been found up to four days after introduction. This concentration is considerably higher than that attained in the blood, which is about one-tenth of a unit per ml. after intramuscular injection of a similar dose. In addition penicillin is required in cases of multiple injury, to prevent pleural sepsis from wound contamination, and to control infection from foreign bodies lodged in the mediastinum. Breathing exercises carried out under supervision have proved of value in obtaining re-expansion of the lung and should be instituted as soon as the patient is able to co-operate.

The duration of stay of these patients in the C.C.S. is tending to increase. During the earlier phases of the campaign many cases of penetrating chest wounds were evacuated on the second post-operative day. They are now held up to five or six days or, better still, until the pleura is dry and dyspnoea at rest has subsided. A marked improvement in their condition has been reported from base since this policy has been adopted. The duration of stay of thoraco-abdominal cases in the C.C.S. is determined by the abdominal lesion. An interval of 10 to 14 days must elapse before these can begin the journey to base.

Mortality

Of the total of 220 patients (Table I) 7 were dead on admission and 18 were moribund or failed to respond to resuscitation. The operative mortality in the series of 100 cases under consideration was 16%.

TABLE III

	Pre-operative Deaths in 220 Cases Admitted to the C.C.S.			Post-operative Deaths in 100 Cases under Review	
	Total Cases	Brought in Dead	Failed to Resuscitate	Total Cases	Deaths
July ..	57	3	2	18	4
Aug. ..	45	2	5	18	3
Sept. ..	30	—	3	19	7
Oct. ..	63	2	6	26	1
Nov. ..	20	—	1	15	1
Dec. ..	5	—	1	4	—
Totals ..	220	7	18	100	16

Deaths following operation have been ascribed to several factors: (1) gross intrathoracic damage, 3 cases; (2) associated injury, 6 cases; (3) thoraco-abdominal injury, 5 cases; (4) blast-lung, 2 cases. There was no definite evidence of injury to the pericardium, myocardium, great vessels, trachea, or oesophagus in the cases operated on in this series, but it is possible that a proportion of those who were brought in dead or failed to resuscitate died from such injuries or from thoraco-abdominal wounds.

Summary

A series of 100 cases of chest injury with a mortality of 16% is reviewed.

Chest injuries occurred in 6.6% of admissions to a casualty clearing station in active battle phases.

Early occlusion of the sucking chest wound is the most important first-aid measure.

Transfusion at field ambulance level is rarely advisable: pre-operative transfusion at the C.C.S. is required mainly on account of associated injury. The presence of a chest wound is no contra-indication to transfusion.

Arrest of haemorrhage, removal of devitalized tissues and accessible foreign bodies, and sound closure of the pleura should be the aims of forward surgery.

Intrapleural penicillin should be given to prevent sepsis in the lung and pleura. Penicillin should be injected intramuscularly for mediastinal or other associated injuries.

Early and repeated aspiration of air and fluid should be instituted and continued until the chest is dry and the lung expanded.

Causes of death are indicated.

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MYELITIS FROM MUMPS

BY

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The use of the name "epidemic parotitis" for the condition more commonly known as mumps unduly narrows our conception of this disease. Although parotitis is usually present it must not be assumed that it is either primary or essential. There is no evidence that the infective process begins in the parotid glands, and certainly it may take a number of atypical forms, notably submaxillary involvement, orchitis, mastitis, and pancreatitis. Neurological syndromes must also be recognized, and the commonest of them is a *lymphocytic meningeal reaction* which may be brisk enough to cause the classical signs of meningitis, although, more often, it is a minor symptomless change discovered only as a result of lumbar puncture. Close study of this meningeal reaction has suggested that the mumps virus is primarily neurotropic (a view which Doptor holds). Thus, examination of the cerebrospinal fluid of symptom-free mumps contacts (Lavergne *et al.*, 1938) showed an increase in the lymphocytes in many instances. Usually this increase was found three days before the end of the incubation period. The ordinary signs of mumps followed in some of these cases showing lymphocytosis, but not in all. This evidence suggests that the primary localization often occurs in the nervous system and that the contacts showing only the lymphocytic reaction had had abortive attacks.

Much less frequently the neurological manifestations of mumps are of a major order, taking the form of acute meningitis, encephalitis, myelitis, or a combination of the foregoing. A few instances of what appeared as neuritic lesions have also been recorded in mumps. It is said that the neurological symptoms appear most usually at the height of the attack of mumps, although they may precede or follow it by a few days.

Clinical involvement of the parotid glands not being an essential feature of mumps, the development of a neurological picture without parotitis may present a difficult problem in

diagnosis. Harris and Bethell (1938) described a case of meningo-encephalitis and double orchitis, yet without parotitis, and Frankland (1941) in a mumps epidemic among soldiers saw some patients with meningeal involvement who had neither parotitis nor orchitis, and postulated that this epidemic may have been caused by a neurotropic type of virus. Similarly, a child with acute meningitis following contact with mumps was seen by me; the fluid was opalescent with lymphocytes and there was spontaneous recovery, neither parotitis nor any other sign of mumps supervening. Again, mumps parotitis may be so slight as to attract little or no attention. Halcrow and Wang (1945) described orchitis and meningo-encephalitis which came on three days after an almost latent parotitis. Thus an acute neurological syndrome accompanying parotitis or orchitis is not likely to cause difficulty, but in their absence the diagnosis may be difficult. The clinician will be helped if a history of contact is obtained, and a knowledge of the possible neurological pictures will also be of assistance.

Mumps can lead to any of the following conditions: meningo-encephalitis, encephalomyelitis, labyrinthitis, optic neuritis, neuroretinitis, and retrobulbar neuritis. Paralysis of a cranial nerve may be seen in mumps encephalitis, notably involvement of the seventh nerve (Ford, 1937). In writing of myelitis Ford mentions the possibility of paralysis of all four limbs, also of paralysis of the diaphragm, and cites two cases of the ascending type of myelitis similar to Landry's paralysis. He also quotes two cases of "local paralysis" recorded by Doptor and by Janbon *et al.* respectively. An example of the local type of paralysis, in which there was paralysis of the serratus magnus following parotitis and orchitis, is given by Harris and Bethell (1938).

When mumps attacks the nervous system the prognosis as a general rule is good and recovery may be expected within a few days; frequently, indeed, it is dramatic. There are two exceptions to this favourable prognostic rule: deafness provides one, and occasionally fulminating cases of meningo-encephalitis have proved to be fatal. Donohue (1941) recorded such a case, and the histological lesion was a perivascular demyelinization similar to that seen in other cases of post-infective encephalitis.

The following example of "local paralysis" resulting from mumps is of interest, especially as it bore a strong resemblance to poliomyelitis. It is not possible to say for certain whether the causative lesion was a true myelitis or perhaps meningoradiculitis or neuritis; however, no sensory loss was found.

Case Report

A boy aged 16 years 9 months developed bilateral parotid mumps on March 28, 1945, and Dr. H. Gwynne-Jones, who saw him, found the temperature raised to 102° F.; by March 31 it had subsided. However, with the appearance of orchitis on April 3 the fever returned (101° F.). Two days later (April 5) the boy noticed pain in his right knee and a numb or "dead" feeling in the leg, and when his doctor visited him he found that he had to exclude the possibility of poliomyelitis. On examination that evening I noted the following: He was flushed; temperature 105° F.; headache, which increased on standing up; patient not drowsy; tongue furred. The parotid swellings had subsided, but there was still orchitis on the left side. There were no other abnormal findings except in the nervous system: fundi and cranial nerves normal; no cervical or spinal rigidity; Kernig's sign positive; right knee-jerk absent; right ankle-jerk diminished; plantar reflexes flexor; weakness of the flexor muscles of the right calf and of the anterior tibial muscles of the right leg. There was no sensory loss. Lumbar puncture was not thought to be necessary. The temperature subsided during the next 48 hours, and the patient recovered without sequelae except for a sensation of "pins and needles" in the right foot for about a week after getting up.

Summary

An example of mumps is presented, showing parotitis followed by orchitis and then myelitis which caused "local paralysis." Without this clear evidence of mumps the sudden development of paralysis of this type would almost certainly have been ascribed to poliomyelitis. Recovery set in early and proved to be complete.

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INTESTINAL OBSTRUCTION DURING LATE PREGNANCY

BY

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Intestinal obstruction complicated by the existence of a viable child *in utero* presents the same problems that are common to all abdominal emergencies occurring late in pregnancy. The diagnosis is not easy, and the presence of the enlarged uterus renders operative treatment difficult. Lower-segment Caesarean section performed at the same time is a formidable undertaking, especially if intestinal resection is necessary. On the other hand, if the pregnancy is allowed to continue, a situation may arise in which the patient is subjected to a natural labour during the critical days which are likely to follow an operation of this kind. The following case illustrates another possible method of treatment. It is reported in order to show that in certain favourable circumstances laparotomy for intestinal obstruction may be delayed until natural delivery has been effected.

Case History

Mrs. A., aged 26, a 2-gravida, was admitted to the North Herts and South Beds Hospital on Dec. 4, 1945, at the 32nd week of pregnancy, for acute abdominal pain and vomiting. In 1936 she had had an operation at which an ovarian cyst had been removed. In 1938 appendicectomy had been performed. In 1940, following recurring attacks of abdominal pain, she had been *x*-rayed after a barium meal, and had been told that she had a "twisted bowel." She was advised that an operation was unnecessary unless her symptoms became worse. In 1942 she became pregnant, and the attacks of abdominal pain were aggravated during this pregnancy. Delivery, however, was accomplished spontaneously at term after a quick and easy labour lasting 10 hours. After the birth of the first child she had no more attacks of abdominal pain until she became pregnant again. This time the attacks were worse, and it was one of these, associated with severe vomiting, that finally brought her to hospital.

On admission she complained of spasmodic pain in the upper abdomen and she had vomited several times during the day. Her temperature was 100° and her pulse rate 98. There was a small scar in the right iliac fossa, and a larger scar having the appearance of a Battle's incision which had been prolonged upwards. The size of the uterus corresponded with the dates, the foetal head was engaged in the L.O.A. position, and no obstetric abnormalities could be found to account for the abdominal pain. The epigastrium was distended and some peristalsis could be seen. A vaginal examination showed that the foetal head was low in the pelvic cavity and there was no dilatation of the cervix. No uterine contractions were felt. Her bowels had not acted for two days. Subacute intestinal obstruction was diagnosed, and a treacle enema produced a good result with some improvement in her general condition. The following day she complained of slight abdominal pain but did not vomit. Further enemata were returned clear, but she remained fairly comfortable all day. The next morning, however, she complained of increased pain and vomited about 1 pint (570 ml.) of dark fluid. Her pulse rate remained at 100, but the uterus was now contracting and it was difficult to distinguish intestinal colic from possible uterine pain. On vaginal examination the cervix appeared to be taken up, and as it was thought that she was about to start labour the membranes were ruptured artificially. Five hours later she was delivered spontaneously of a living child weighing 6 lb. (2.7 kg.).

Immediately after delivery she complained that she still had severe abdominal pain, and, with the uterus now well retracted, the signs of intestinal obstruction were obvious. The abdomen was very distended, and the thinness of the abdominal wall after delivery made the peristalsis in the distended coils of intestine plainly visible. There was also a point of tenderness over the larger of the two scars. An enema again failed to produce a result, and four hours after delivery her general condition had deteriorated and it was decided to perform laparotomy.

Operation.—The abdomen was opened through a right lower paramedian incision, and a quantity of dark blood-stained fluid was found in the peritoneal cavity. The approach was rendered difficult by numerous adhesions between the omentum and the abdominal wall and by the distended coils of intestine. Inspection of the caecum was also difficult because it was bound down by adhesions in the right iliac fossa. It was found to be collapsed, and the peritoneal surfaces of the two scars were then inspected. A thickened band attached to the larger of the two scars was divided, but the coils of intestine remained distended. A further search revealed that the real site of the obstruction was at a point 3 in. (7.6 cm.)

above the ileocaecal junction, where angulation of the ileum had been caused by adhesions to an enlarged gland. After this portion of the ileum had been gently dissected free the obstruction was relieved and it was decided to do nothing further. The abdomen was closed without drainage. The uterus had been observed to be well retracted and it had in no way added to the difficulty of the operation. A continuous intravenous drip saline was given, and next day the patient was quite comfortable. A bile enema produced a faecal result with much flatus, and this was repeated twice daily for two days, after which the bowels acted naturally. There were no puerperal complications, and the child, although eight weeks premature, made good progress. Both were discharged from hospital after four weeks.

Commentary

The causes of intestinal obstruction during pregnancy are the same as those which produce it in the non-pregnant state. It is probable, however, that pregnancy predisposes to an attack. This is explained partly by the rearrangement of the viscera due to pressure by the enlarged uterus, and partly by the physiological atony which is believed to occur in the smooth muscle of the intestine as a result of endocrine changes.

From the obstetric point of view there are four possible methods of treatment, depending upon whether the obstruction is acute or subacute. They may be summarized as follows:

1. Immediate laparotomy. Lower-segment Caesarean section followed by treatment of the obstruction on general surgical principles.

2. Immediate laparotomy. Relief of the obstruction without disturbing the pregnancy. Morphine and progesterone to postpone labour as long as possible.

3. Surgical induction of labour. Spontaneous relief of the obstruction after delivery.

4. Surgical induction of labour. Laparotomy immediately after delivery if the obstruction is unrelieved.

The method chosen will depend upon the individual case. The first method is recommended by DeLee and Greenhill (1943) for all cases in which the symptoms are urgent and the child is viable. The second method would be chosen by most obstetricians only in the early months of pregnancy. The third and fourth methods are applicable only to certain cases of subacute obstruction, and may be considered together in connexion with the case described.

It has been shown experimentally (Wright, 1940) that animals with low and uncomplicated obstruction can be kept alive for as long as 28 days provided that sufficient fluid containing chloride is given and vomiting is controlled by aspiration of the stomach. Valuable time may thus be gained in cases of subacute obstruction. Moreover, uterine contractions are likely to be initiated by the violent peristalsis of the intestine, and conditions are therefore favourable for the onset of labour.

Before deciding to delay the laparotomy when the obstruction appears to be subacute, it is necessary to be absolutely satisfied upon three conditions: (1) that strangulation is absent; (2) that the obstruction is low; (3) that there is a reasonable prospect of rapid delivery. The first and second of these can be determined only by clinical observation. The third depends upon the history of previous labours, the state of the cervix, and the presence or absence of uterine contractions.

In the case recorded above all three conditions were favourable. The obstruction was at first subacute and uterine contractions were detected after 36 hours. After delivery the obstruction was not relieved, but the operation was made considerably easier by the absence of the enlarged uterus, and the patient was saved an unnecessary Caesarean section.

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As a part of the health programme for displaced persons, two *x*-ray teams will visit U.N.R.R.A. displaced persons' centres in the U.S. zone of Germany. Each team consists of a doctor and three technicians from the International Red Cross, using mobile microfilm *x*-ray units carried in ambulances. This mass operation, to be completed in a reasonably short time, will enable U.N.R.R.A. to discover and treat incipient cases of tuberculosis as well as improve the methods used in the advanced cases. Its hospitals in the U.S. zone now have 2,000 beds for patients.

TRAUMATIC BLEPHAROSPASM AS AN ISOLATED SYMPTOM

BY

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The following case of spasm of the orbicularis oculi, which occurred as the result of trauma and responded to local nerve blockage with procaine, is described because no record of any similar occurrence is to be found in the literature.

Case Record

A girl aged 13 attended hospital with a history that her brother had poked a stick in her right eye five days previously, since when she had been unable to open it. On examination this eye was screwed up as though a foreign body were present. She was unable actively to open it, but it was easy to force the lids apart, revealing a normal globe. There was no conjunctivitis or any other inflammatory process, and no foreign body was present. The skin surface of the lids was intact and there was no bruising or oedema, but fibrillary twitchings of the orbicularis oculi were evident on inspection. This finding was magnified on palpation, when the muscle could be felt twitching beneath the fingers, giving the same impression as if a sparrow or other small bird were in the hand.

A diagnosis was made of spasm of the orbicularis. The treatment adopted was blockage of the facial nerve as in akinesia for cataract extraction. Two ml. of procaine was injected at the neck of the mandible with satisfactory results. Within five minutes the twitching ceased and the patient could open and close her eye in the normal way. Breakage of the vicious circle was all that was required, for when seen four days later there had been no recurrence and full movement of the lids was present. Vision was 6/6 in each eye.

Discussion

Reflex blepharospasm occurring in conjunction with external lesions of the globe is an everyday incident; isolated blepharospasm unconnected with bulbar mischief is rarer. Benedict (1941) has usefully classified the condition as symptomatic, hysterical, and essential. The first of these, while reflex in origin, is assisted by voluntary contraction in many cases, and is difficult to overcome on attempted passive opening of the lids, as all know too well from experience.

The hysterical type persists during sleep and is characterized by incomplete closure of the lids, which show fibrillary twitchings; attempted opening of them is attended with increase of spasm, but the condition can be cured by persuasion. Essential blepharospasm, on the other hand, presents tonic and clonic forms, and is precipitated by a lesion in the central nervous system; it is alleged to follow encephalitis in some cases, and has been observed in the Parkinsonian state. In that case the lid movements are athetotic, resembling those of the fingers, but attempts at forcible opening meet with increased resistance. In the present case the lids were separated comparatively easily and without the supervention of extra spasm.

Taylor (1934) describes a case of local tetanus in which the only muscles involved were the masseter and ipsilateral orbicularis oculi. The wound of inoculation was a laceration of the scalp incurred while diving in subtropical waters 17 days previously. The ocular manifestation was a tonic spasm of the orbicularis which resulted in a marked narrowing of the palpebral fissure without complete closure of the lids. The case responded to antitetanic measures combined with a reopening of the healed scalp wound, which was then swabbed with neat carbolic.

In cases of blepharospasm associated with trauma the findings will vary greatly with the individual case. It may be noted, however, of recent injuries that a surprisingly small number of cases show any blepharospasm, closure of the eye being due to reactionary oedema or haematoma. Children of course form an exception to this, a voluntary contraction often being superadded owing to nervousness. But, in adults, lid spasm is seen commonly in diseases affecting the anterior segment, including injuries of some standing when iritis has begun, but only rarely in the earlier stages when they first attend hospital. In most cases a lid oedema will have damped down the response; in others a paresis of the muscle resulting directly from the trauma must be presumed; while there is, of course, that large group

which has incurred ocular damage without injury to the lids. The case described falls in none of the usual classifications, and is readily amenable to treatment.

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Obstructed Labour due to Sacral Tumour of Foetus

Tumours occurring at the caudal end of the foetus are rare enough to be of real interest when they are met with. Chaffin (*Surg. Gynec. Obstet.*, 1939, **69**, 337), quoting Calbet and Fochier, states that sacrococcygeal tumours of the newborn may be expected to arise once in approximately 34,500 births. One-fifth of these infants are stillborn. Others, although born alive, do not survive many days.

All types of tissue have been found in these tumours, from simple undifferentiated cells to a parasitic foetus. It occurs more frequently in females than in males. Commonly an antenatal diagnosis of a foetal abnormality can be made, but it is more often impossible till labour is well advanced, as in the case described below. If for no obvious reason labour is not proceeding according to plan, the existence of a tumour of the foetus causing delay would, of course, be thought of.

CASE REPORT

On April 28, 1945, Mrs. K., aged 41, was admitted to the County Hospital at 8 a.m. Her last child is now 12 years old. She had no obstetrical history in the meantime. On admission she was suffering from severe pre-eclamptic toxaemia. She was about two weeks off full term. Her B.P. was 185/110; albuminuria +^{a}; there was extensive oedema right up to the xiphisternum. It was not possible to diagnose the presentation by palpation, but the foetal heart was thought to be heard about half-way between the umbilicus and the pubis. A skiagram of the abdomen showed a single foetus lying in the longitudinal axis with the head fully extended into a face presentation.

She went into labour the same day about noon and progressed rapidly—so much so that the face, chin anterior, was lying on the perineum at about 1.30 p.m. There was no advance from this point even though conditions seemed favourable for a natural delivery. Forceps were applied, the head was delivered easily, and the anterior and posterior shoulders were extracted. From here the foetus would not budge even with a strong pull in both foetal axillae. A hand was inserted beyond the foetus and a large soft cystic lump was found attached to the foetal buttocks. It felt larger than a foetal head. A long wire was passed into the uterus under guidance of the already inserted left hand and a hole made in the tumour. Thin blood-stained fluid came away. The tumour was now broken up to reduce its size. The child was then extracted, and in so doing the tumour separated from the foetus and was left behind in the uterus. It was easily delivered manually afterwards.

The foetus was a well-developed female stillborn infant weighing 5 lb. 12 oz. (2.6 kg.). The area from which the tumour arose extended over the whole buttocks. The lower end of the sacrum and coccyx was absent. The lower end of the gastro-intestinal tract was long and tapering, ending apparently in the perineal end of the tumour mass. The anus was imperforate. There was no other foetal abnormality.

Description of Tumour.—It weighed approximately 3 lb. 1 oz. (1.39 kg.). It was a large soft cystic mass covered with healthy skin and no hairs. On the perineal end of the skin there was a small dimple to which the imperforate intestine was attached. Throughout the mass were groups of cysts filled with blood-stained light fluid, and in other areas were soft gelloid masses looking not unlike a sarcoma. Microscopical appearance: "The tissue consisted of an embryonic matrix resembling glial tissue, in which were acini lined with epithelium, columnar in type with a suggestion of ciliation. The outstanding feature was masses of hyaline cartilage. The tumour is a congenital sacral teratoma."

The mother made an uninterrupted recovery. Her blood pressure was normal and the albuminuria had disappeared within two weeks.

I wish to thank Prof. W. D. O'Kelly for the pathological report.

JOHN J. WALLS,
M.D., M.R.C.P.I., D.P.H.
County Hospital, Roscommon.

The National Council for the Unmarried Mother and her Child held in London last November a conference entitled "Homes and Hostels of the Future," when the speakers included Dr. Dorothy Taylor, Dr. John Fenton, M.O.H. for Eastbourne, and Dr. Letitia Fairfield. The conference was attended by a very representative audience of over 350 people. A full report has now been printed as a pamphlet of 48 pages, and copies are available at 1s. 6d. from the general secretary, N.C.U.M.C., Carnegie House, 117, Piccadilly, London, W.1.

Reviews

SURGERY OF THE HAND

Chirurgie de la Main. By Marc Iselin. (Pp. 238; illustrated. 145 francs.) Paris: Masson et Cie.

This volume is a study of the treatment of injuries of the hand of every type and is evidently based upon a very wide experience. The opening chapters deal with the examination of the injured hand in order to ascertain the precise nature of the injury, which is often so different from what at first appears, and this is followed by a brief account of the methods of treatment and the general results of injury, including the fixation of joints and tendons. Now comes an admirable account of the treatment of cutaneous lesions, which in the hand may be of supreme importance, and this includes detailed descriptions of methods of grafting and of the treatment of burns and contracted scars. There follows a discussion of the modern methods of treating divided tendons, and only those who have dealt with these difficult cases can appreciate the importance of these methods. The next section is on nerve injuries, and here we must part company with the author as regards the treatment of the nerves themselves, though there are valuable suggestions for the management of the damaged hand. The later chapters describe ingenious methods for replacing lost fingers, and especially the reconstruction of the thumb, and deal with prosthetic appliances for use after amputation.

With the one exception of the chapter on nerve injuries, which after all is a very special subject, the book is admirable and contains many ingenious proposals and suggestions of value. The importance of injuries of the hand is fully recognized today, and we regard this as a valuable contribution to the subject.

SULPHONAMIDE TREATMENT

The Sulphonamides in Theory and Practice. By J. Stewart Lawrence, M.D., M.R.C.P. (Pp. 125. 9s.) London: H. K. Lewis and Co. 1946.

Dr. J. Stewart Lawrence in *The Sulphonamides in Theory and Practice* has produced what we believe to be the first British book on this subject, although M.R.C. War Memorandum No. 10 has served the same purpose, despite its unbound condition and modest price. This book is of modest size, and gives a simple account of sulphonamide therapeutics, after describing the properties of the various drugs and dealing briefly with their *in vitro* study, particularly from the point of view of relative degrees of activity. An interesting feature is provided by the author's original observations on the treatment of six conditions, each represented by a series of cases with controls. Sulphonamide treatment was of no apparent benefit in tonsillitis, influenza, or bronchitis; there was, of course, marked benefit in urinary tract infections. Sonne dysentery responded best to sulphapyridine, and the same drug, administered for several months, is somewhat surprisingly claimed to have been of benefit in pulmonary tuberculosis; the effect is believed to have been on the tubercle bacillus itself, since it is categorically stated that "the secondary invaders were quite unaffected." Penicillin is not mentioned except in a brief final chapter on the relative indications for these two forms of chemotherapy. The author suggests that in infections due to organisms susceptible to both, the indications for penicillin are suppuration, necrosis, or bacteriaemia. This is an ingenious rule, but not to be taken too literally or in disregard of other factors in the individual case.

This book should be of considerable service to the practitioner: if its precepts were generally followed sulphonamide therapeutics would be more efficient, and the consumption of these drugs would probably diminish by half.

A TEXTBOOK OF MEDICINE

Textbook of Medicine. By various authors. Edited by J. J. Conybeare, D.M., F.R.C.P. Seventh edition. (Pp. 1,164; illustrated. 30s., plus 9d. postage.) Edinburgh: E. and S. Livingstone. 1945.

It is a striking commentary on wartime developments that Dr. J. J. Conybeare's *Textbook of Medicine* in its seventh edition should be the fourth since 1939, and that more copies have been sold during the war than in the preceding ten years. Dr. Conybeare manages his team of sixteen contributors with

great skill, putting in his own work just at the right place, and the revisions for this edition indicate editorship at its best. Several pages on sulphonamides and half a page on penicillin, at the beginning of the section on infectious diseases, give an excellent summary of present-day chemotherapy and cleverly get over the difficulty that arises when advances come at a quicker rate than books can be printed and published. Sampling the text for advances in medicine reveals no serious deficiencies, though an unfortunate page reference (255 for 225) makes the finding of work on the rhesus factor a little difficult. Glandular fever now appears under infectious diseases; so does tetanus, though poliomyelitis is still in the section on diseases of the nervous system. These are problems that must haunt every writer or editor of a medical textbook, and it is, perhaps, unfair to mention them instead of stressing the sterling qualities of this work. But it has already won a firm place with students and practitioners, and as it seems likely to go on appearing in peace or war a word or two of criticism will not be taken amiss.

SURGICAL ANATOMY

A Manual of Surgical Anatomy. By Tom Jones and W. C. Shepard. (Pp. 195; 267 illustrations, 153 in colour. 25s.) London: W. B. Saunders. 1945.

There can be no doubt about the thoroughness with which the United States entered into all aspects of the prosecution of the war. Few in this country, for instance, would have thought that the preparation and publication of a book on surgical anatomy could be considered part of the war effort, yet that is the intention of *A Manual of Surgical Anatomy*. The fact that this was possible may be considered as an indication of the difference in the impact of the war on the two countries. The book was prepared under the auspices of the Committee on Surgery of the Division of Medical Sciences of the National Research Council especially "to furnish the Medical Departments of the United States Army and Navy with compact presentations of necessary information in the field of military surgery." The original manual was published just before the end of World War I, but the present volume (coming too late for World War II) is almost completely new.

The book is actually an atlas of some 267 anatomical drawings, with an explanatory index (giving both Standard English and B.N.D. terms) at the end. The line illustrations are all delightfully drawn by the two artist editors, whose styles are so similar that it is difficult on cursory examination to distinguish between them. In addition to the purely anatomical drawings there are others devoted to the illustration of applied anatomy, such as incisions, the technique of paravertebral injections, and so on. Those showing the operative exposures for various sympathectomies and in pneumonectomy are particularly well conceived and useful. On a page size of 11 by 8 inches (28 by 20 cm.) there is no need to cramp the drawings; in consequence a lot of detail which would otherwise be lost can be included.

Altogether an admirable volume, and at 25s. must in these times be acknowledged a bargain. The publishers also issue a pocket edition at 15s.

MEDICAL SCIENCE IN THE NETHERLANDS INDIES

Science and Scientists in the Netherlands Indies. Edited by Pieter Honig, Ph.D., and Frans Verdoorn, Ph.D. (Pp. 491; illustrated. $4.00 or £1 1s.) New York: Board for the Netherlands Indies, Surinam, and Curaçao; London: William Dawson and Sons, Ltd. 1945.

For many years before the war of 1939–45 the Dutch Government medical staff in Java issued—year by year—pamphlets recounting their researches. These disappeared during the military occupation, and the material is now dealt with in the volume *Science and Scientists in the Netherlands Indies*, which gives a picture of the development and status of a number of branches of the natural sciences in Indonesia. The present work consists of original articles, biological sketches, reviews, and a list of scientific institutions.

Formerly there were three services in Indonesia—the civil medical, the military medical, and the vaccination service. More recently a public health service was instituted to provide curative medicine for the inhabitants of the archipelago. This now gives special attention to prevention of disease. There are medical colleges, central and regional laboratories, institutions for leprosy and smallpox—all of good standard; also a number of medical journals, published weekly. In this large tropical belt (an area of 760,000 square miles, 3,000 islands, and 65,000,000 inhabitants) there is wide scope for investigation and research. Malaria is rife and much attention is paid to the control of it. The numerous salt-water lagoons have been found to be ideal for *Anopheles sundaicus*, which, though not a carrier of malaria in other parts of the world, is one of the most dangerous vectors in the Netherlands Indies. Since 1921, thanks to careful quarantine measures and extensive vaccination, the archipelago has been almost free from cholera. Though nearly all the epidemics were due to genuine cholera vibrios, strains isolated in the Celebes Islands were found to be definitely haemolytic. The aetiology of a group of febrile diseases was traced to a spirochaete, closely related to the leptospirae which cause Weil's disease. Plague, which first reached Java from Rangoon in 1905, has since become endemic. In 1933 there were over 20,000 cases, but since 1939 plague diminished considerably. Its incidence in the ports and on the coasts of Java has always been negligible.

This book is full of interesting data on diverse tropical subjects, though one might hope that subsequent issues will be less bulky and not so heavy. The many good illustrations give a clear idea of the country and its scientific institutions.

Notes on Books

Dr. Maitland Radford's last appointment was that of M.O.H. for St. Pancras, the borough in which B.M.A. House stands, and he became well known to many members visiting headquarters or working here. His death in 1944 was widely and deeply mourned. All could recognize his brilliant gifts, but not many were aware that he wrote occasional verse. Some of his friends, headed by Dr. C. E. Wheeler, have prepared a small volume *Poems by Maitland Radford*. These twenty-eight short pieces reflect vividly the man they loved. Dr. Wheeler's introduction is followed by contributions headed "Maitland as we Knew Him" by seven intimates, and a preface to the poems by Sir Henry Slesser. During the thirty years covered by the poems in this volume Maitland Radford did not write one till he had been specially stirred by some incident of his experience, emotional or intellectual, or both. The edition—a fine example of book production—is limited to 500 copies, and George Allen and Unwin Ltd. are the publishers (price 7s 6d.).

H. K. Lewis and Co. have published a second version of the little book entitled *Notable Names in Medicine and Surgery*, by Mr. HAMILTON BAILEY, F.R.C.S., and Mr. W. J. BISHOP, Sub-librarian of the Royal Society of Medicine, which was noticed in these columns after its first appearance in 1944. There is no need now to do more than quote the subtitle, "Short biographies of some of those whose discoveries (not necessarily the greatest medical discoveries) have become eponymous in the medical and allied professions." The price is 15s.

The British Drama, by JAMES BRIDIE, is No. 12 of the pamphlets published at 1s. 3d., under the general heading "The British Way," by Craig and Wilson Ltd., 70, Bath Street, Glasgow. One or two earlier members of the series have had health and science as their subjects. Our reasons for mentioning this one are that the author (Dr. O. H. Mavor to us) is physician as well as playwright; that anything Bridie says is always worth listening to; and that doctors are not indifferent to the art of the theatre, about which he writes with knowledge, cool common sense, and pungency.

Miss EVELYN PEARCE, for many years senior sister-tutor at the Middlesex Hospital, has added to her writings for the benefit of nurses a booklet *First Aid Quiz*, reprinted from the *Nursing Mirror*. It is published at 3s. 6d. by Faber and Faber.

Hospital Care of the Surgical Patient, by Drs. GEORGE CRILE, jun., and FRANKLIN L. SHIVELY, jun., was reviewed in this column on Aug. 26, 1944, when we said that a newly appointed house officer would find it of considerable value in his early encounters with surgical patients. A second edition has now been received from Charles C. Thomas, 301, East Lawrence Avenue, Springfield, Illinois, U.S.A., price $3.50; it is published in this country at 14s. by Baillière, Tindall and Cox.

The Joint Tuberculosis Council has issued two pamphlets which were approved on Nov. 17, 1945. One is the second report of the Committee on Development of the Tuberculosis Services (formerly the Committee on Reorganization of the Tuberculosis Services); and the other is a memorandum of advice on Mantoux conversion in hospital and institutional staffs. Copies may be had from the honorary secretary, Joint Tuberculosis Council, 1, Becket Street, Oxford.

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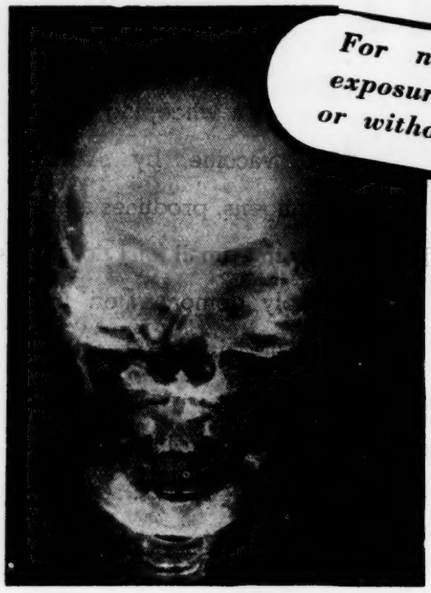

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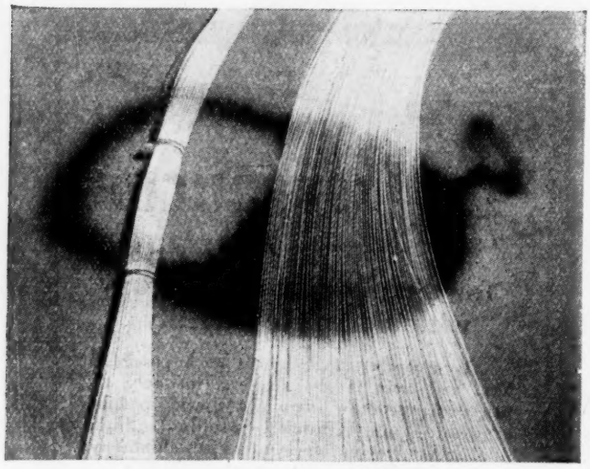

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BRITISH MEDICAL JOURNAL

LONDON

SATURDAY MARCH 30 1946

THE HEALTH SERVICE BILL

The National Health Service Bill was published on Thursday last week. The White Paper summarizing its provisions is printed in the opening pages of this week's *Journal*, along with a statement on it issued by the British Medical Association. The Association has already circulated both these documents to all members of the profession. The second reading is expected before Easter, and the Government is likely to hasten on legislation. Medical men will therefore have to think clearly and quickly if they are to secure those modifications in the Bill which they believe will ensure the progressive evolution of the science and art of medicine. Anything which hinders or hampers this will harm the public.

Medical thought has always found its fullest expression and originality in an atmosphere of freedom. It has become stagnant and retrogressive when it has been restricted by external authority. For long periods in the past Medicine has been kept immature by the dogmas of those in power. In the worship of the State, which is the modern dogma, it is threatened by forces no less powerful than those of the past. If Medicine is to extend its frontiers and renew its strength in each generation it has to go on working out its own salvation and keep itself clear from the influence of prevailing ideologies founded on less exact knowledge. This is what "freedom of the profession" means. The Anglo-Saxon world has made its great contributions to medical knowledge in the framework of a free tradition which makes the highest call on individual responsibility and initiative. It is now our collective responsibility to the future to see that this framework is not destroyed and replaced by a prefabricated structure, however dazzlingly bright the new gadgets may appear to the designer's eye. We must hold fast to what has been proved good and see that it continues. If the new service in its evolution can preserve the continuity of what is sane and sound in our medical history the details will fall into place; adjustment of these is a matter of ingenuity; but if the structure is unsound no amount of ingenuity will improve it—if it is rigid it will crack at the first strain.

In brief, the Bill offers to the whole of the population of Great Britain a complete medical service—general practitioner, consultant and specialist, institutional, nursing—free of immediate charge for the service rendered. It excludes the industrial and the school medical services and therefore is not comprehensive. The cost of the service will be paid for by the ratepayer, the taxpayer, and the contributor to the national insurance fund. The "middle-men" who distribute the public's money to the doctor and the hospital and the health centre will be the Minister of Health, the Regional Authority, and the Local Authority. The pooling and distribution of money in some such way as this is necessary if a nation-wide organization, for example, of hospitals, is to be efficient. To what point it should be carried in the provision of personal services needs consideration.

The Minister of Health is to have responsibility for the service, and considerable powers in the exercising of it. The principal feature of central organization is the Central Health Services Council, composed of representatives of the main operatives in the service—doctors, dentists, nurses, midwives, chemists, and hospital and local government managers. Medical representatives will be in a majority. The function of the Council will be advisory, not executive. There will also be standing advisory committees on special aspects of the service, and these are to be empowered to advise the Minister directly. A small Central Committee on the Distribution of Medical Practices, mainly professional in composition and working under the direction of the Minister, will supervise the distribution of doctors in the service. This Central Committee will decide whether a doctor may start a new practice or change from one to another in the public service.

Local administration will be effected through (1) Regional Hospital Boards and Local Hospital Management Committees; (2) County and County Borough Councils for certain domiciliary and clinic services; and (3) Local Executive Councils for family practitioner services by doctor and dentist. The Minister of Health proposes to become the owner of all the hospitals in the country, voluntary and municipal, special and general, teaching and non-teaching. He proposes, in fact, to rope all hospitals into a State Hospital Service. A consultant service will be based on the hospitals.

The endowments of voluntary teaching hospitals will pass directly to the new Boards of Governors. A Hospital Endowment Fund will absorb the endowments of other voluntary hospitals. After existing debts and liabilities have been met from this the Minister will then apportion the capital value of the Fund among the Regional Hospital Boards.

Regional Hospital Boards—to the number of 16 or 20—will administer all hospitals in "natural hospital areas" based on the eleven University medical teaching centres in England and Wales. The Minister will appoint the members of these Boards after consulting the appropriate university teaching centre, the medical profession, and the local health authorities. Within the Region, Local Hospital Management Committees appointed by the Board will be responsible for local groups of hospitals, or for single large hospitals. These committees will be made up of representatives of local authorities, general practitioners in the area, and senior medical and surgical staff of the hospitals concerned. Undergraduate and postgraduate teaching hospitals will be managed by their own specially constituted Boards of Governors, with representation of the university and teaching staff. They will also have members nominated by the Regional Hospital Board and members appointed after consultation with the major local

authorities concerned. The teaching hospitals will have separate financial arrangements. The Governors, advised by a selection committee, will appoint their own staff. Private patients may be treated in separate hospital accommodation by part-time specialists in the service, provided that fees are within a controlled scale and that non-paying patients may be treated in the same accommodation if medical considerations require this.

The second part of the proposed local organization concerns certain clinic and non-hospital services the administration of which becomes a statutory duty of the Local Health Authorities—County Councils, County Borough Councils, or combinations of them. The services include maternity and child welfare; domiciliary midwifery; health visiting; home nursing; vaccination and immunization; ambulances; provision of Health Centres; and the school medical service (under the Education Act, 1944).

General practice will be conducted from Health Centres provided and equipped by the Local Health Authorities or by arrangements with doctors in separate practice who will join the service from their own surgeries. Local Executive Councils (successors in effect to the Insurance Committees)—one for each local health authority—will arrange for the general practitioner services in accordance with regulations under the Act; make contracts with and remunerate the doctors, dentists, and chemists in the service; provide local disciplinary machinery; and make available information on the facilities of the service. The Local Health Authorities, as mentioned, will provide, maintain, and equip Health Centres, and appoint nursing, secretarial, and other auxiliary staff to them. The local authority will arrange with the Local Executive Council for the use of the centres by the doctors and dentists in contract with it. General practitioners in the service will receive a basic salary plus a capitation payment which tapers as the number of persons on the doctor's list increases. The Government proposes to abolish the sale and purchase of public practices and to pay compensation on terms announced elsewhere in this issue. Finally, a National Public Laboratory Service for the control of infectious diseases has been set up through the agency of the Medical Research Council.

Such in brief outline is the scheme now before Parliament, the public, and the profession. The Council of the B.M.A. is "opposed, on grounds of public interest, to certain important features of the Government's proposals," and the reasons for this opposition are set out clearly on pages 469–74 of this week's *Journal*. The Minister is proposing to set up at least three services—a hospital service administered regionally; a general practitioner service administered by one form of local organization; and clinic services administered by another form of local organization. Add to this a school medical service administered under the Education Act, an Industrial Medical Service run partly by industry and partly by the Ministry of Labour, the existing Public Health Service shorn of its major attractions, and two forms of laboratory service (National and Local)—and it seems as if the Minister has failed to coordinate the whole into a "comprehensive" health service. The B.M.A. Council proposes as a rational step that coordination should be effected at the regional level. The Regional Boards, it suggests, should own and administer Health Centres. The Boards should, in fact, be responsible for all treatment as distinct from environmental services. As to central organization, the B.M.A. Council would like to see the Central Health Services Council made a working instrument by having the reports of the standing committees submitted to it, and by it to the Minister.

Although it does not own the voluntary hospitals of this country, the medical profession is vitally concerned in their fate, because it is by, with, and from them that British doctors have for centuries received their nourishment and inspiration, especially the great teaching hospitals, and such intellectual pioneers as the Hospital for Nervous Diseases in Queen Square and the Brompton Hospital in London. These institutions, and others like them, have more than a local habitation and a name. Their renown is world-wide. Whatever safeguarding clauses may be introduced, no one can regard with equanimity the proposal that these places of learning should become State hospitals owned by the Minister of Health. Is this proposed ownership put forward on medical or on political grounds? And if the Minister owns all the hospitals in the country, appoints the governing bodies, and appoints the Regional Boards and through them the Local Hospital Management Committees, what finally will be the status of the men who work in the hospitals? Outside the teaching hospitals they will be appointed by the Regional Boards. Will they not in the slowness of time become the employees of the solitary owner presiding over the Ministry of Health in Whitehall? It is the first blow that counts, and once the blow of ownership is delivered it would be surprising if it were not followed by others, delivered at the principle of private and personal responsibility for the conduct of professional life and action. Power whets the appetite for more power. The more responsibility is centralized, the less is the responsibility left to the individual. And the practice of medicine demands the highest exercise of individual responsibility. A committee can't heal a sick man.

The general practitioner of the future will work in a Health Centre owned by the local health authority and be paid, to begin with, partly by salary. He will be unable to start practice or change practice except by permission of a central committee working under the direction of the Minister at the Ministry of Health. Owning nothing except the right to work under direction—presumably not even the tools of his craft—and inspired by the prospect of controlled security, what kind of effort will the future general practitioner put forth? Will the kind of regimented medical service contemplated give the right setting and stimulus to the Jenners, Hunters, Budds, Snows, and James Mackenzies of the future?

To bring these questions into relation with Principle I of those listed on page 468 do the Government's proposals of State ownership of hospitals and local authority ownership of Health Centres—the two places of practice of the consultant and specialist and of the general practitioner respectively—lead "directly or indirectly to the profession as a whole becoming full-time salaried servants of the State or local authorities"? This is the question. If the answer

is Yes, then the medical profession must decide anew whether this is what it wants or does not want. If it decides that a State service would lead to the frustration of Medicine, then it would be against the interests of the public to promote it.

Once the dividing line is passed and doctors are absorbed in a service which in effect makes them all employees of central and local government their independence and professional freedom will come to an end. They will become officers in a technical service responsible to central and local officials. They will no longer have that direct responsibility *to* the patient which has hitherto been the inspiration of medicine and the mainspring of medical knowledge and ethics. Once all that is sound and sane in the tradition of Medicine is sacrificed to administrative convenience and centralized governmental control, then medicine will cease to be a profession. The Bill as a whole must be looked at in this light, and this must not be obscured by preoccupation with details. If the conception of the whole is right, and the framework such as will maintain the essence of professional tradition, then details can be adjusted. And it is for the medical profession as a whole to decide what the issue is to be.

REFECTION

Nearly 35 years ago, in a paper now recognized as one of the classics of modern nutrition, Hopkins[1] described the remarkable effects on the growth of rats of small additions of milk to a diet otherwise lacking in accessory food factors. Some years later the two great Americans, Osborne and Mendel,[2 3] confirmed these findings, though they had to feed much more milk to get their rats to grow satisfactorily. Workers since have inclined to agree that milk in quantities as small as those used by Hopkins would not support growth, but the reasons for this discrepancy have remained unexplained for many years. The mystery has now been largely solved, and it is fitting that the solution should be given by Sir Frederick himself.[4] It is gratifying to know that the distinguished doyen of biochemistry is still actively contributing to a science he helped so much to create. The explanation of the mystery lies apparently in the nature of the carbohydrate forming part of the purified ration. With rice starch, dextrinized potato starch, or sugar the amounts of milk originally used by Hopkins prove insufficient, but when the diet contains raw potato starch the old findings are confirmed in every detail. Though this was not specifically stated in the 1912 paper, it is clear from the recent publication that potato starch was used in the early experiments. Peculiar effects of this starch were noticed also by other workers. Fifty years ago Eijkman[5] showed that hens given this carbohydrate instead of polished rice did not develop polyneuritis, while between 1923 and 1927 Randoin and her collaborators published a series of papers[6] describing its vitamin-sparing effects. They also pointed out its low digestibility—a property previously noticed by Langworthy and Deuel.[7]

In the meantime a striking dietary phenomenon, which later was to prove especially closely connected with potato starch, appeared accidentally in the laboratory of Fridericia in Denmark in 1925.[8 9] A young rat declining in the usual way on a diet containing raw rice starch and deficient in vitamin B suddenly recovered, started to grow, and at the same time began passing bulky faeces containing undigested starch. The condition could be transmitted to other deficient rats in that laboratory. This ability to grow and thrive in the absence of vitamin B from the diet was aptly called "refection" by Fridericia.[8] By a curious coincidence it appeared somewhat later independently and spontaneously at the Lister Institute, also among rats receiving rice starch.[10] About the same time Kon and Watchorn,[11] in studying the vitamin-sparing effect of potato starch, showed that with it refection, which with rice starch is an exceedingly rare spontaneous phenomenon, was of quite common occurrence. Their experience was abundantly confirmed by other workers.[11]

It is generally agreed that a "refected animal" is able to make use of the vitamin factors synthesized by its intestinal flora, though a normal rat may possess this faculty only to a small degree or even hardly at all. Attempts to explain the phenomenon in a simple way—for example, as an infection by a specific organism—have not been successful, and it appears that the condition is due to a fairly complicated chain of events. Hopkins and Leader[4] favour the following explanation put forward by Kon *et al.*[12] Micro-organisms in the caecum thrive on the undigested starch present there, while the presence of starch-splitters leads to a vigorous fermentation, resulting in an acid *p*H. These conditions favour the synthesis of much larger quantities of vitamins of the B group than are formed in the alkaline caecum of a deficient rat in the absence of available carbohydrate. The acid reaction in the caecum enables the rat to absorb and utilize a proportion of the vitamins found there, and the animal becomes in fact akin to the ruminant in nutritional independence, the caecum acting as a vicarious rumen. The same reasoning can doubtless explain established rice-starch refection, but it has never been satisfactorily shown why the rat becoming spontaneously refected on a rice-starch diet suddenly and largely loses the power to digest the starch. There may possibly be some connexion with the rather similar condition of starch dyspepsia described in man by Hurst and Knott.[13] The bacterial basis of potato-starch refection is well demonstrated by the inhibitory effect of sulphonamide drugs on the growth of refected rats[14] and on the formation in their gut of vitamin B_1 and riboflavin,[15] and the study of this interesting condition may well help in the investigation, on the one hand, of processes of vitamin synthesis and uptake in the ruminant, and, on the other, of the nutritional role of the symbiotic flora of man. It should

[1] *J. Physiol.*, 1912, **44**, 425.
[2] *J. biol. Chem.*, 1918, **34**, 537.
[3] Ibid., 1920, **41**, 515.
[4] *J. Hyg.*, Camb., 1945, **44**, 149.
[5] *Virchows Arch.*, 1897, **148**, 523.
[6] Cf., for example, Randoin, L., and Lecoq, R., *J. Pharm. Chim.*, Paris, 1927, **5**, 147.
[7] *J. biol. Chem.*, 1920, **42**, 27.
[8] *Skand. Arch. Physiol.*, 1926, **49**, 55.
[9] *J. Hyg.*, Camb., 1927–8, **27**, 70.
[10] Roscoe, M. H., ibid., 1927–8, **27**, 103.
[11] Cf. Kon, S. K., *Proc. Nutr. Soc.*, 1945, **3**, 217.
[12] *J. Hyg.*, Camb., 1938, **38**, 1.
[13] *J. Physiol.*, 1930, **70**, xxxvii.
[14] Kon, S. K., *Proc. Nutr. Soc.*, 1945, **3**, 237.
[15] Coates, M. E., *et al.*, *Nature*, 1946, **157**, 262.

be noted, however, that some of the potato-starch effects may not be related to bacterial activity, and, indeed, Hopkins and Leader[4] believe that the milk-sparing effect, in spite of superficial similarity, is different from, and wholly independent of, refection; and they do not exclude the possibility of the presence of certain growth factors in potato starch.

STREPTOMYCIN

We referred recently (Feb. 23, p. 278) to the use of streptomycin for the chemotherapy of tuberculosis. There are numerous other infections—notably those due to various Gram-negative bacilli—which may prove amenable to this substance, and the growing volume of American literature dealing with it is a measure of the hopes entertained for its future. Of all the innumerable antibiotics studied during the past few years streptomycin appears to be the only one combining a wider range of antibacterial activity than that of penicillin with such freedom from toxicity that parenteral injections of large doses are harmless. Discovered two years ago by Waksman and his colleagues, it is extracted from cultures of *Actinomyces griseus*, and has been obtained and used clinically in varying degrees of purity. Weight for weight it appears to be less active than penicillin, and the unit of activity is also even smaller: it is defined as that quantity which when dissolved in 1 ml. of broth will just prevent the growth of a standard strain of *Bact. coli*. A unit of penicillin so defined, with *Staph. aureus* as the test organism, would be roughly one-fiftieth of what it is, and the existing unit has been condemned as inconveniently small; why that of streptomycin has been so fixed that an ordinary daily dose runs well into seven figures is not clear.

Several groups of workers[1-4] have studied streptomycin pharmacologically. When given by the mouth it is scarcely absorbed at all, but retains activity and appears in high concentration in the faeces. For systemic effect it can be given subcutaneously, intramuscularly, or intravenously; it is then excreted by the kidneys, but more slowly than penicillin, with the result that injections at intervals of six hours suffice to maintain a therapeutic blood level. Like penicillin it must be given intrathecally in order to produce a therapeutic level in the cerebrospinal fluid, but it passes from the blood into other body fluids. No serious toxic effects have been seen, but injections into tissues may be painful and into veins may cause thrombosis; fever, urticaria, and headache have also been observed. To what extent impurities are responsible for such effects is not clear.

Streptomycin has naturally been exploited chiefly in infections due to bacteria insusceptible to penicillin. One of the earliest reports—that of Reimann *et al.*[5]—described the treatment of 5 cases of typhoid fever: these occurred in a single epidemic with unusual features, including an exceptionally prolonged course; treatment was started in some of the cases at a late stage, and the strain of *Bact. typhosum* was less susceptible *in vitro* to streptomycin than most. Even allowing for these unfavourable features, the results were not decidedly encouraging. The same may be said of the two cases of septicaemia due to Gram-negative bacilli described by Anderson and Jewell.[6] On the other hand they appear to have cured a patient with *H. influenzae* meningitis. Three cases of this condition, all treated with good results, are included in the series of 45 cases of various infections treated with streptomycin at the Mayo Clinic, and described by W. E. Herrell and D. R. Nichols.[7] These infections include coliform septicaemias, chiefly associated with severe urinary tract infection, and simple urinary infections, in most of which results were good; several cases of undulant fever, in only one of which a really striking effect was obtained; and 5 cases of bronchiectasis treated by inhalation as well as intramuscular injection with 4 successes. *Bact. friedländeri* was eliminated from the sputum of 2 of these patients, and ozaena due to this organism seems also to have responded to some extent. The treatment of syphilis in 4 patients was followed by relapse. While the efficacy of streptomycin in some of these and other conditions mentioned cannot yet be assessed, there seems to be no doubt of its striking all-round efficacy as a urinary antiseptic. H. F. Helmholz[8] has shown that *in vitro* all five species of bacteria commonly found in urinary tract infections are suppressed by a concentration only one-fifth of that attained in the urine by ordinary systemic dosage. No other drug has so all-embracing an action.

Streptomycin is still not generally available in the U.S.A. It is being supplied there to one or two hospitals, and is also being used for the treatment of men in the Forces injured in the war. When manufacture is well under way in the States we may expect supplies over here.

SMALLPOX IN THE VACCINATED

"The common tendency is both to underestimate and to exaggerate the capacity of vaccination to protect against smallpox."[9] Because, within limits, that capacity is incapable of exaggeration it is not always realized that sometimes the limits may be narrow and the duration of absolute immunity be short-lived. The purpose of vaccination being to confer protection against smallpox, it follows that any attempt at inoculation which fails to raise the level of immunity should be regarded as unsuccessful. Evidence of the immunizing properties of reputable vaccine-lymph is too firmly established to be shaken by a number of reports, in the last few years, of smallpox in the recently vaccinated; these do, however, unfortunately leave no doubt that insusceptibility is sometimes assumed on insufficient grounds.

The course of events following primary vaccination is plain enough. In the interpretation of the results of revaccination the difficulties and the dangers lie. The immediate reaction can be seen in immunes and non-immunes alike. The only certain valid evidence of (temporary) success is vesicle formation; and an assumption of the presence of complete insusceptibility made on the strength of almost any lesser grade of reaction involves a risk which grows greater as the interval since the last successful inoculation lengthens.

The severity of an attack of smallpox measures the resultant of two opposing forces—the patient's immunity and the virulence of the infective agent. The clinical features of variola major in the vaccinated are determined largely—though not wholly—by the level of the patient's acquired immunity at the time of his exposure to infection; and the most highly modified cases—which are prone to occur where often least expected, among individuals assumed to be well vaccinated—are as likely to be diagnosed only in retrospect as are the most virulent toxic cases which form the opposite clinical extreme. Yet recent experiences have reminded us

[1] Anderson, D. G., and Jewell, Marjorie, *New Engl. J. Med.*, Oct. 25, 1945, p. 485.
[2] Stebbins, R. B., Graessle, O. E., and Robinson, H. J., *Proc. Soc. exp. Biol.*, N.Y., 1945, **60**, 68.
[3] Zintel, H. A., Flippin, H. F., Nichols, Anna C., Wiley, Marjorie M., and Rhoads, J. E., *Amer. J. med. Sci.*, 1945, **210**, 421.
[4] Heilman, Dorothy H., Heilman, F. R., Hinshaw, H. C., Nichols, D. R., and Herrell, W. E., ibid., 1945, **210**, 576.
[5] *J. Amer. med. Ass.*, 1945, **128**, 175.
[6] Loc. cit.
[7] *Proc. Mayo Clin.*, 1945, **20**, 449.
[8] Ibid., p. 357.
[9] Ricketts, T. F., *The Diagnosis of Smallpox*, 1908, London.

of the infectivity of the patient who bears but minimal skin blemishes. To him it matters little that his disease is smallpox; it may cost the lives of his unprotected contacts. The effect on this problem of the proposed repeal of the Vaccination Acts, 1867 to 1907, remains to be seen. Repeal of these Acts was recommended by the British Medical Association's Committee on Immunization[1] in 1935, and this recommendation was reaffirmed by the Council of the Association at its meeting in June of last year.

IDIOPATHIC FRACTURE OF THE FIRST RIB

As long ago as 1885 Arbuthnot Lane[2] suggested that fractures of the first rib were more common than was usually thought; but in 1937 Breslin[3] found only 27 cases in a review of the literature, to which he added 5 of his own; Aitken and Lincoln[4] described another case in 1939. Mass radiology surveys, however, are beginning to reveal that this fracture is not uncommon. The break is always situated just proximal to the scalene tubercle, and the skiagrams usually show an irregular fracture surrounded by a fusiform swelling of callus or solid bone. Alderson[5] found 64 cases among 81,682 members of the Royal Navy. Of the 35 men in the first group which he reported 30 were under the age of 25. Only 11 in the whole series gave a history of symptoms of possible trauma, 2 complained of sudden pain in the shoulder region after physical training, 2 had received some previous local injury, and 7 had been lifting or carrying heavy weights previous to their recruitment. In 2 instances serial *x*-ray examination showed that union was taking place with the development of callus and bone. All the cases occurred in men, and Alderson found no instance of the condition in 3,433 Wrens; it is not, however, confined to the male sex.

The cause of these fractures is not yet established. It is unlikely that they are congenital abnormalities, since the line of fusion of the primary and secondary ossification centres is well behind their usual position in the rib, and sometimes the breaks have been observed to heal, though in other instances non-union and pseudarthrosis result. Lane suggested that trauma might cause the lesion, a heavy blow struck horizontally backwards forcing the clavicle against the first rib. But in these cases a history of trauma is rare. The frequency of the lesion in youth, especially after periods of strenuous physical training, suggests that it may develop gradually, and that the fractures are fatigue or stress fractures of the "march fracture" type. This is the view of Alderson, who also believes that they are sometimes related to the carrying of heavy weights. Hartley,[6] however, argues that the fractures are usually complete and that frequently there is considerable displacement of the fragments—evidence that muscle-pull does precipitate the fracture. The site of the fracture is certainly where the scalenus anticus is inserted into the rib, and if this muscle contracts violently it will tend to pull upwards the anterior part of the rib while the posterior part is held down by the subclavian artery and brachial plexus. Some observers have called the lesions "cough fractures," suggesting that they are caused by the sudden contraction of the muscle during a fit of violent coughing. This last theory seems the most plausible explanation of this unexpected finding resulting from the routine *x*-ray examination of the chests of large numbers of apparently healthy individuals.

1 *British Medical Journal Supplement*, 1935, **1**, 282.
2 *Guy's Hosp. Rep.*, 1885, **43**, 321; *British Medical Journal*, 1887, **2**, 119.
3 *Amer. J. Surg.*, 1937, **38**, 384.
4 *New Engl. J. Med.*, 1939, **220**, 1063.
5 *Brit. J. Radiol.*, 1944, **17**, 323; *Lancet*, 1945, **1**, 287.
6 *Lancet*, 1945, **1**, 128, 446.

INDUSTRIAL LIGHTING

Industrial Lighting is the first bulletin published by the Industrial and Welfare Division of the Department of Labour and National Service of the Commonwealth of Australia (37, Swanston Street, Melbourne). It is particularly welcome, as in some respects Australian practice is in advance of that obtaining in this country. Many of the standards formulated in this pamphlet arose from the necessity of war production, and were enforced by statute in new and modified installations in protected factories. It appears that, though not universally compulsory, the standards here advocated have been widely applied. There is much empiricism in these regulations, but a workable scheme emerges in treating the problem as one of distribution of light, of the absence of glare, and the methods for obtaining satisfactory contrast. Australian practice favours diffuse lighting; prominence is therefore given to fluorescent lamps and to standardized cold cathode light. A useful discussion deals with the types of reflectors, screening required at given heights, and the prevention of glare by the use of diffusing filaments. A section on colour gives the range of the paints approved for colour contrast. The suggestion that machines should be painted in light colours is interesting, and fits in with the planned use of colour to aid contrast. The Australian standards have been criticized on the ground that they allow for lower brightness values than is commonly assumed to be necessary. Perhaps the stress here laid on other factors provides a justification for these lower values.

MEDICAL RESEARCH IN MELBOURNE

The twenty-sixth annual report of the Walter and Eliza Hall Institute of Research in Pathology and Medicine is from the pen of the director, Prof. F. M. Burnet, M.D., F.R.S., who succeeded Dr. C. H. Kellaway, F.R.S., two years ago, when Dr. Kellaway came from Melbourne to take up the post of scientific director of the Wellcome Foundation in England. Prof. Burnet, writing in July, 1945, says that during the year under review an effort was in progress to think out and define the new relationships which in one way and another have developed between the Institute, the Royal Melbourne Hospital, and the University. At present there is very little more than physical contiguity between the Institute and the hospital. On the one hand the major lines of investigation by the staff concern problems which are not those of a general hospital, and on the other the demands of the war made it impossible for medical graduates of sufficient calibre to be spared for even part-time clinical research in the wards; it is hoped that once demobilization of the medical services comes into force both the Institute and the hospital will be able again to make full use of their association by developing an active programme of clinical research. If the link with the hospital has been at least temporarily weakened, a more direct link with Melbourne University has been forged by Prof. Burnet's appointment to the newly established chair of experimental medicine. In that capacity he is charged with the organization of a university department within the Institute, its work being naturally determined primarily by the interests of the holder of the chair. Study of the more general problems of the epidemiology of infectious disease will complement the investigations of the laboratory workers in the virus department, and this work should eventually fill an important niche in the field of medical research and teaching in Melbourne. Meanwhile after preliminary discussion with the authorities concerned the Board of the Walter and Eliza Hall Trust has decided that the Institute should be suitably incorporated, and the legal process for this has begun.

THE PROFESSION AND THE BILL

MASS MEETING OF SURREY PRACTITIONERS

ADDRESS BY DR. CHARLES HILL

A meeting of practitioners resident in all the Surrey Divisions —Kingston, Richmond, Croydon, Reigate, and Guildford— and in contiguous Divisions in the Metropolitan Counties Branch was held at Wimbledon Town Hall on Sunday afternoon, when the Secretary of the Association (Dr. Charles Hill) gave an address on the National Health Service Bill. Dr. T. W. Morgan, honorary secretary of the Kingston Division, presided. About one thousand members of the medical profession were present.

Dr. Hill said that it was not necessary for him to review the long history of events which led up to the introduction of the Bill. At the time of the General Election a stage had been reached at which a modification of the scheme published in the original White Paper would have been in general, though with some exceptions, acceptable to the profession. After the change of Government the Negotiating Committee had met the new Minister on only two occasions, and all that had taken place was an exchange of observations; there had been no negotiations, no cross-table discussion. Dr. Hill then proceeded to give a factual summary of the proposals in the Bill, describing in some detail the administrative set-up and each of the three main services—hospital and consultant, general practitioner, and public health. He added a word on private practice. In so far as the public wanted this it would be available from practitioners inside the service unless employed on a whole-time basis. In relation to hospitals, the Minister would become the owner of private as well as public accommodation and would decide what portion should be devoted to general hospital purposes, what should be subject to payment of an amenity addition, with no consultant or specialist fees, and what should be private in the ordinary sense.

The Government proposed that the Bill should proceed to second reading before Easter; then would follow the more protracted committee examination, with the passage of the Bill into law in the late summer.

A Critical Examination

What was to be the attitude of the profession? Let it be recognized that the profession had for long pressed for the improvement and extension of health facilities. Clearly, some of the proposals in the Bill were good ones—for example, the proposal to organize the hospitals on a regional basis. By what yardstick should the proposals be measured? First, the public interest; secondly, by the principles which had guided the profession in the formulation of its policy. Beneath those principles there was one firm determination, now as ever to resist the conversion of the profession into a technical branch of central or local government. (Applause.) "There is no need for me to repeat the arguments why in fact we resist the proposal that we should divide our loyalty between our patients and some body, State or other, which employs, pays, and so directs us." These were not naked proposals for a whole-time salaried service under the State, but the question was whether they contained the germ of such a service, whether they led sooner or later to that form of service to which the great majority of the profession in the public interest was opposed.

Take the general practitioner proposals. The compensation figure, £66 millions, was in the Bill (Clause 36). In so far as this related to the capital value of practices as distinct from the value of premises, it was a fair and reasonable estimate of aggregate value. Nobody would be able to criticize these proposals on the ground of inadequate compensation for capital values. That might bring delight to some; it brought anxiety to others, for one thing was quite clear: that the proposal to abolish goodwill in practices must be examined as a principle rather than as a business proposition. (Applause.) In the statement on this subject which the Minister made some months ago he made it clear that he thought it necessary to regulate and control the distribution of practitioners and that this step involved interference with the capital values of practices for buying and selling, and from that premiss he passed to the consideration of compensation. Dr. Hill continued:

"The buying and selling of practices, which has come in for a good deal of criticism, some of it justified, most of it unjustified, is not only a financial transaction, it is the basis of a voluntary method of distribution of practitioners. If buying and selling of practices goes the inevitable consequence, in the view of many, will be the establishment of a system of posting, placing, and appointing general practitioners in the future. It is perhaps theoretically possible for a void to be left, but much more likely is it that a new system of posting would take the place of the old voluntary system. If that argument be sound, then our battle begins in defence of the custom of buying and selling practices. It begins there rather than at the stage of direction."

"Negative Direction" of Practitioners

On the other hand there were some who believed that even if the custom of buying and selling practices were abolished a system for the distribution of practitioners could be devised which did not involve the most objectionable features of the proposal of "negative direction." To this subject the profession must give the most careful attention. Was negative direction a fair description of the proposals for the distribution of general practitioners in the future? What was proposed was that existing practitioners should come in without question, needing no permission of the central body, unless indeed they proposed to move somewhere else. Future entrants would apply first to the local executive council and through that body to the Medical Practices Committee at the centre. The one criterion which that committee must apply was the sufficiency of doctors in the area in question. But if more than one doctor applied for a vacancy a selection would have to be made. Was that something which, taken alone or with the other proposals, led to the view that in it and by it the profession lost an essential freedom and approached more closely to salaried officership under the State?

Then there was the proposal of salary as an element in remuneration. The Minister had told them that basic salary would be a substantial part of the remuneration; the new White Paper said that it would be a part of remuneration; the Bill did not mention it, but an apparently inspired writer in the *Observer* that day had put forward the view that it would be a small proportion. We need to know the Government's intentions. Was a principle involved here? If a substantial part of the general practitioner's remuneration was by salary was it likely to lead, sooner rather than later, to the general practitioner becoming a wholly salaried officer in the State?

It was recognized, of course, that in certain types of practice, in sparsely populated areas, for example, special methods of remuneration might be needed; the Highlands and Islands scheme in Scotland was an example. But to suggest that it was necessary in the public interest that practitioners should be remunerated in large part by salary, that competition for patients should be replaced by a system which encouraged competition to avoid them was nonsense. Of course this part of the proposals was welcomed by those who believed in whole-time service under the State, for a remuneration which was in large part salary would ere long be a remuneration which was wholly salary. The salary method of employment was proper to many branches of public service, including some in medicine, but in the field of personal treatment the salary method created an employer–employee relationship leading to a division of loyalties and of responsibility which was against the best interests of the public and the profession.

Health Centres

As for the Health Centre proposal, Dr. Hill thought it a pity that the Health Centre had moved into such a central position in this controversy. It had become a slogan, as if Health Centres would solve the problems confronting practice to-day. What the general practitioner needed was readier access to radiological, pathological, and other facilities. There were advantages in gathering a number of practitioners under one roof. It assisted in the organization of nursing and of clerical services. It had points about it which naturally appealed to doctors' wives. On the other hand, there were disadvantages; the patient would have to travel for greater distances, there would be an inevitable loss of privacy, and a danger that such

Health Centres might degenerate into the out-patient department at its worst.

"We are not going to be bemused into believing that merely to erect a Centre, to group doctors there, to provide organized facilities for the keeping of records and the dispensing of medicines, will of itself mean a profound improvement in medical service. It is something of interest which might well be examined and developed, but to state that a committee of doctors is necessarily better than an individual doctor, that merely by this physical grouping much is done to improve the public health, is merely a pretence."

He went on to mention one or two other points relating to general practice. One was the suggestion in the new White Paper that in so far as there was capitation payment it should taper as the number of patients increased—a "two-a-penny-five-for-twopence" idea. Another was the restriction whereby a practitioner having obtained the necessary permission to practise in a particular area might be prevented by Ministerial order from practising in a certain part of that area—say, if in Wandsworth, in a particular ward—which meant that patients were deprived of free choice so far as that practitioner was concerned. Yet another was the lack of provision in the compensation total for loss of capital in respect of professional premises. The Ministry throughout the discussions on compensation had declined to recognize that factor, and if a practitioner in selling his house to an incoming practitioner sought or obtained a price which was substantially higher than its value as residential premises he laid himself open to fine or imprisonment.

Hospital Ownership

Was the ownership of all hospitals by the State in the public interest? In future the Minister by virtue of the National Insurance Bill now before Parliament would become the source of practically all hospital maintenance income. The Government would have assumed the responsibility of a comprehensive service, including the hospital service, and would have become responsible for the cost of hospitals generally. It would exercise a tremendous influence on hospital development by reason of that financial power. In the view of the Council of the Association, to proceed to actual ownership was an unnecessary and undesirable step.

"It is believed that the effectiveness of a hospital, its responsiveness to public feeling, its susceptibility to public criticism, the maintenance of its position as a centre of local interest and welfare and affection—things essential to humane hospital administration—will go if in fact the local hospital becomes a State hospital remotely controlled from Whitehall."

With this destroyed, something of lasting value would have passed out of British life.

There were three administrations in this Bill—hospitals at the regional level, general practitioner service at the local executive council level, local authority service at the county and county borough level. They were bound as a profession to criticize that vertical division of the health services. It was bad that much of the work which the general practitioner could properly undertake in the field of the school medical and the maternity and child welfare services should be left where it was. Incidentally under these provisions attendance at confinements was not necessarily to be a duty upon general practitioners; midwives would call in doctors as heretofore, but only doctors who were "suitably qualified" in obstetrics—the beginning of the removal of obstetrics from the normal field of the general practitioner. A branch of the profession which was cut out badly in this service was the public health medical service in smaller authorities than counties and county boroughs.

What Does All This Add Up To?

If they believed in a whole-time salaried service under the State, as some of their colleagues sincerely did, they would give, no doubt, a qualified welcome to these proposals; but the majority of the profession believed that whatever the compensation totals, whatever the form of remuneration, they must search out the principles which lay behind in order to make sure that the independence of the profession and the freedom of the public were preserved. The report of the Spens Committee on remuneration was not yet available, but he had no reason to suppose that it would be unsatisfactory. But was that the answer they were searching for?

"It is hoped that our profession will be able to examine these proposals in relation to principles. Will they lead to the submergence of our profession, the loss of its independence? The answer to that question must determine our future action."

If they reached the conclusion that these proposals were contrary to public and professional interest what could they do? The Government with its majority could carry the proposals into law. Clearly the profession must do its utmost to present its point of view to fair-minded people in all parties. The one hope was in convincing the public that the proposals were not in the best public interest.

"After all, one cannot help being a little suspicious about these proposals. For 30 years our profession pressed for the enlargement and improvement of health services. But when did the interest of Governments begin? With the publication of the Beveridge report. Sir William Beveridge, approaching these problems as an economist, saw that to create a social security fund was to create two main outgoings from it, in respect of unemployment and of sickness, and he said quite frankly that before such a fund could be established it would be necessary to secure a high level of employment (Assumption C) and a comprehensive health service (Assumption B). Now that we have the national insurance proposals in Parliament you will appreciate how a new impetus was given to the development of the health service and the desire to exercise control over doctors' certification."

If they were right in detecting the signs of a substantial movement towards whole-time salaried service then they were at a crisis in the history of the profession. Once over the line, with the change of status, the loss of independence, the new relationship to the State, a fundamental alteration would have been made. It must be clear that this was an issue of public, not merely of professional, interest.

"Our profession has nothing to be ashamed of, despite the words of those of our profession who spend their time belittling it for political purposes. (Loud applause.) It has no need to be ashamed of its contribution to the public good in years gone by. We can afford to put our position plainly to the public as a matter of public as well as professional interest, and we must do it."

The Government could legislate, but without the co-operation of the profession there would be no service. Sooner or later the profession would have to reach a decision on this question, but the time for decision was not yet. That time would come when the Bill had become an Act and they could examine it in its final form. There would be ample time for the profession to make up its mind. What it was necessary to do now was to examine these proposals to find out where they conflicted with public interest and to tell the public. He begged them now to devote their intelligence rather than their emotions to an examination of these proposals, not begin to look round for scapegoats, or break up into frictional or fractional groups, or even distinguish between members and non-members of the Association, but rather to hammer out their views on this Bill and make sure that they were points of real principle which were taken.

"My job," said Dr. Hill in conclusion, "is to express as vigorously as I can the views of the profession as a whole, and I shall go on doing that job in the next few months. But it is your job as a profession to make up your minds on these issues. We are on trial now. This is the most critical phase in the history of the profession. Let us not consider it as a matter of compensation or remuneration. Let us look at principles and determine where in fact the principles lie, and let us, at last, learn to stick together." (Loud and long-continued applause.)

Questions

Many questions were asked on the details of the Bill. Here, briefly summarized, are Dr. Hill's replies.

In general, the disciplinary machinery contemplated in the Bill is the same as under National Health Insurance, ascending to the Minister.

A doctor in the service who desires to change his area will make application through his local executive council to the Medical Practices Committee at the centre. The committee may or may not permit him to go.

The effect of the proposals seemed at first examination to be to abolish the status of assistant.

For consultant and specialist appointments a short list was to be made by an expert committee, so that although the regional board actually made the appointment, it made it from names of

persons submitted by a well-qualified advisory body. With regard to general practice, the Medical Practices Committee would be predominantly medical; though it should be added that if the system set up was autocratic and destroyed individual freedom it did not matter whether the administrators of the system were medically qualified or not, it was wrong just the same.

One thing which was not yet covered, but which must be ensured, was that where a practitioner was outside the scheme his certificates should be valid for social security purposes equally with those of practitioners within the scheme.

There was nothing to prevent a general practitioner from entering upon or continuing in private appointments—e.g., in works or factories or in insurance companies. These appointments would come within the category of private practice which was permitted under the scheme. But clearly some offices, such as that of district medical officer under the Poor Law, would come to an end.

At the end of the meeting a few three-minute speeches were permitted. Dr. H. R. CRAN suggested that the Council should be furnished with some constructive ideas as alternatives to proposals in the Bill. He thought it should be optional to a practitioner whether he accepted part salary or a larger capitation fee for patients on his list. Dr. KILROE contested the idea that a salaried doctor owed his first obligation to the authority which employed him. Would a tuberculosis officer consider his county council more than his patient? (Cries of "Yes.") That was not his experience. Mr. A. C. DE B. HELME said that not enough stress had been laid on the fact that there had been no negotiation with the Minister. He believed that even now they could if they acted in concert demand negotiation. It was extraordinary what power the Minister took to himself under the Bill. He was made an autocrat, almost a dictator. "If this Bill comes into operation in anything like its present form it will represent something very much like that regime that is now coming to its sorry end at Nuremberg."

Dr. N. E. WATERFIELD said that it was up to them all to get a mastery of the Bill because they could influence public opinion. Dr. WATSON (chairman of Reigate Division) considered that the retention of the goodwill of practices was of fundamental importance. He had in mind especially the case of the elderly man about to retire and the young man coming in. Dr. DAVID HALER drew attention to Clause 69 (3): "Any power conferred on the Minister by this Act to make regulations shall, if the Treasury so direct, not be exercisable except in conjunction with the Treasury." This made the autocracy more complete. It was for the profession to see that it did not pass under Treasury control. Dr. GOUGH, speaking as a young doctor, complained that the view-point of younger doctors was inadequately represented on the Negotiating Committee. He wanted more representation at that level of doctors who had no financial interest in medicine so far as ownership of practices was concerned.

Dr. HILL, in reply to a question, gave some account of how the £66 millions for compensation had been calculated. It had been done by estimating the pre-war aggregate general practitioner income, multiplying by a period of years, and adding a so-called betterment factor. For example, if the aggregate pre-war income figure were taken and multiplied by 1.9 years and a betterment factor of 22% added, or if it were multiplied by 2 years and the betterment factor were 16%, the result in either case would work out to approximately 66 millions. One thing which was important in the division of this money was that those practitioners who had returned from service or had lived in bombed-out areas were entitled to put in not only their current figures but their pre-war incomes. He added, however, that the important demurrer had been made, alike in a letter to Mr. Bevan on March 8 and in the Council's statement of policy on the Bill, that the medical profession was in no way committed to the policy of abolishing the custom of buying and selling goodwill, and although the subcommittee of the Negotiating Committee had entered into discussions on the question of the compensation figure, it did not accept the policy from which the necessity for compensation arose.

The meeting closed after according to Dr. Hill, on the motion of Dr. J. W. STARKEY, honorary secretary of the Surrey Branch, a vote of thanks for "an able, honest, and valuable address."

SOME IMPORTANT CLAUSES OF THE BILL

We print below some of the more important clauses of the Bill which illustrate the power demanded by the Minister of Health. It may be noted that in Section 34, subsection (4), under General Medical Services, a doctor may be able to practise only in part of an area controlled by an Executive Council, a severe limitation on freedom of choice being thus imposed.

1. Transfer of Hospitals to the Minister

6.—(1) Subject to the provisions of this Act, there shall, on the appointed day, be transferred to and vest in the Minister by virtue of this Act all interests in premises forming part of a voluntary hospital or used for the purposes of a voluntary hospital, and in equipment, furniture or other movable property used in or in connexion with such premises, being interests held immediately before the appointed day by the governing body of the hospital or by trustees solely for the purposes of that hospital, and all liabilities to which the governing body of a voluntary hospital were subject immediately before the appointed day, being liabilities incurred solely for the purposes of that hospital.

(2) Subject to the provisions of this Act, there shall also, on the appointed day, be transferred to and vest in the Minister by virtue of this Act all hospitals vested in a local authority immediately before the appointed day, including all property and liabilities held by the local authority, or to which that authority were subject immediately before the appointed day, being property and liabilities held or incurred solely for the purposes of those hospitals or any of them.

(3) If it appears to the Minister that, in the case of any hospital to which the foregoing provisions of this section apply, the transfer of the hospital or of the interests referred to in subsection (1) of this section will not be required for the purpose of providing hospital and specialist services, he may, at any time before the appointed day, serve a notice to that effect on the governing body of the hospital or, as the case may be, on the local authority in whom the hospital is vested, and thereupon the foregoing provisions of this section shall cease to apply to that hospital.

Provided that if the governing body or local authority, within such period (not being less than twenty-eight days from the service of the notice) as may be specified in the notice, serve a notice on the Minister stating that they wish the hospital or interests to be transferred to the Minister, the foregoing provisions of this section shall apply to the hospital.

(4) All property transferred to the Minister under this section shall vest in him free of any trust existing immediately before the appointed day, and the Minister may use any such property for the purpose of any of his functions under this Act, but shall so far as practicable secure that the objects for which any such property was used immediately before the appointed day are not prejudiced by the provisions of this section.

2. Endowments of Voluntary Hospitals

7.—(1) Where any voluntary hospital to which the last foregoing section [section 6 above] applies is, before the appointed day, designated by the Minister under this Part of this Act as a teaching hospital or is one of a group of hospitals so designated, all endowments of the hospital held immediately before the appointed day shall on that day, by virtue of this Act, be transferred to and vest in the Board of Governors constituted under the following provisions of this Part of this Act for the teaching hospital.

(2) All such endowments shall vest in the Board free of any trust existing immediately before the appointed day and shall be held by the Board on trust for the purposes of the teaching hospital generally, and the Board may dispose of any property comprised in those endowments and hold the proceeds thereof on trust for those purposes:

Provided that the Board shall, so far as practicable, secure that the objects of any such endowment are not prejudiced by the provisions of this section.

(3) Where any endowment which is to be vested in a Board of Governors under the foregoing provisions of this section is, immediately before the appointed day, subject to a charge in respect of a liability which would, but for this subsection, be transferred to the Minister under the last foregoing section,

that liability shall, instead of being transferred to the Minister, be transferred to the Board on the appointed day.

(4) All endowments of a voluntary hospital to which the last foregoing section applies, other than a hospital to which the foregoing provisions of this section apply, being endowments held immediately before the appointed day, shall on that day be transferred to and vest in the Minister by virtue of this Act free of any trust existing immediately before that day; and the Minister shall establish a fund, to be called the Hospital Endowments Fund, to which he shall transfer all such endowments.

(5) Regulations shall provide—

(a) for the control and management of the Hospital Endowments Fund by the Minister and for conferring on him any powers required for that purpose, including powers to sell or otherwise dispose of any assets of the Fund and to carry the proceeds into the Fund;

(b) for enabling the Minister to apply, to such extent as may be prescribed, the assets of the Fund for discharging any liabilities transferred to him under the last foregoing section from the governing body of such a voluntary hospital as is mentioned in the last foregoing subsection;

(c) subject to any provision for the discharge of such liabilities, for apportioning the capital value of the Fund among the several Regional Hospital Boards constituted under the following provisions of this Part of this Act, in such shares as may be determined by the Minister in the prescribed manner, and for distributing the income of the Fund to those Boards proportionately to those shares;

(d) for enabling the Minister, on the application of a Regional Hospital Board, to transfer to that Board, for such purposes as may be approved by the Minister, any part of the capital assets of the Fund not exceeding in value the said share of that Board, and for reducing that share accordingly.

(6) Subject to such general conditions as may be prescribed, any income received by a Regional Hospital Board under the last foregoing subsection may be used for such purposes relating to hospital services as the Board thinks fit.

3. General Medical Services

33.—(1) It shall be the duty of every Executive Council in accordance with regulations to make as respects their area arrangements with medical practitioners for the provision by them as from the appointed day, whether at a health centre or otherwise, of personal medical services for all persons in the area who wish to take advantage of the arrangements, and the services provided in accordance with the arrangements are in this Act referred to as "general medical services."

(2) Regulations may make provision for defining the personal medical services to be provided and for securing that the arrangements will be such that all persons availing themselves of those services will receive adequate personal care and attendance, and the regulations shall include provision—

(a) for the preparation and publication of lists of medical practitioners who undertake to provide general medical services;

(b) for conferring a right on any person to choose, in accordance with the prescribed procedure, the medical practitioner by whom he is to be attended, subject to the consent of the practitioner so chosen and to any prescribed limit on the number of patients to be accepted by any practitioner;

(c) for the distribution among medical practitioners whose names are on the lists of any persons who have indicated a wish to obtain general medical services but who have not made any choice of medical practitioner or have been refused by the practitioner chosen;

(d) for the issue to patients or their personal representatives by medical practitioners providing such services as aforesaid of certificates reasonably required by them under or for the purposes of any enactment.

34.—(1) Subject to the provisions of this Part of this Act relating to the disqualification of practitioners, every medical practitioner engaged in medical practice (otherwise than as a paid assistant) who wishes to provide general medical services shall be entitled, on making an application at any time before the appointed day in the prescribed manner to the Executive Council for any area in which he is practising, to be included in the list of medical practitioners undertaking to provide general medical services for persons in that area.

(2) With a view to securing that the number of medical practitioners undertaking to provide general medical services in the areas of different Executive Councils or in different parts of those areas is adequate, the Minister shall constitute a committee, to be called the Medical Practices Committee, for the purposes of considering and determining applications—

(a) made before the appointed day and by a medical practitioner who is not entitled under the last foregoing subsection to be included in the list of an Executive Council, for inclusion in that list; and

(b) made on or after the appointed day for inclusion in any such list kept by an Executive Council for any area;

and all such applications made in the prescribed manner to an Executive Council shall be referred by that Council to the said Committee, and any medical practitioner whose application is granted by the said Committee shall, subject to the provisions of this Part of this Act relating to the disqualification of practitioners, be entitled to be included in the list.

(3) The Medical Practices Committee may refuse any such application on the ground that the number of medical practitioners undertaking to provide general medical services in the area or part of an area concerned is already adequate, and, if in the opinion of the Committee additional practitioners are required for any area or part but the number of persons who have made applications exceeds the number required, the Committee shall select the persons whose applications are to be granted and shall refuse the other applications.

(4) Except as provided by the last foregoing subsection, the Medical Practices Committee shall not refuse any such application, but the Committee may grant an application subject to conditions excluding the provision of general medical services by the applicant in such part or parts of the area of the Executive Council as the Committee may specify.

(5) The Medical Practices Committee shall be constituted in accordance with the Sixth Schedule to this Act and the provisions of that Schedule shall apply to that Committee.

(6) A medical practitioner who has made such an application as aforesaid which has been refused or has been granted subject to the said conditions, may appeal to the Minister, and the Minister may, on any such appeal, direct the said Committee to grant the application either unconditionally or subject to such conditions as the Minister may specify.

(7) Where the Medical Practices Committee select persons from a number of applicants, the persons selected shall not, during the period for bringing an appeal to the Minister or pending the hearing of any such appeal, be included in the list in question, and on any such appeal the Minister may, if he grants the appeal, direct either that the application shall be granted in addition to the applications already granted or that it shall be granted instead of such one of those applications as the Minister may specify:

Provided that in the latter case he shall make the other applicant a party to the appeal, and no further appeal shall be brought by that applicant in respect of the application in question.

(8) Regulations shall make provision—

(a) for requiring Executive Councils to make reports, at such times and in such manner as may be prescribed, to the Medical Practices Committee as to the number of medical practitioners required to meet the reasonable needs of their area and the different parts thereof and as to the occurrence of any vacancies on the lists of medical practitioners kept by them under this Part of this Act and as to the need for filling such vacancies;

(b) for describing the procedure for the determination of applications by the Medical Practices Committee and for the making and determination of appeals to the Minister under this section, and for requiring Executive Councils and applicants to be informed of the decisions of the Committee and the Minister.

4. Prohibition of Sale of Medical Practices

35.—(1) Where the name of any medical practitioner is, on the appointed day or at any time thereafter, entered on any list of medical practitioners undertaking to provide general

medical services, it shall be unlawful subsequently to sell the goodwill or any part of the goodwill of the medical practice of that medical practitioner:

Provided that, where a medical practitioner, whose name has ceased to be entered on any such list as aforesaid, practises in the area of an Executive Council in whose list his name has never been entered, this subsection shall not render unlawful the sale of the goodwill or any part of the goodwill of his practice in that area.

(2) Any person who sells or buys the goodwill or any part of the goodwill of a medical practice which it is unlawful to sell by virtue of the last foregoing subsection, shall be guilty of an offence and shall be liable on summary conviction to a fine not exceeding—

(*a*) such amount as will in the opinion of the court secure that he derives no benefit from the offence; and

(*b*) the further amount of five hundred pounds;

or to imprisonment for a term not exceeding three months, or to both such fine and such imprisonment.

(3) Notwithstanding any other enactment prescribing the time within which proceedings may be brought before a court of summary jurisdiction, proceedings for an offence under this section may be brought either within one year from the date of the commission of the alleged offence or within three months from the date on which evidence sufficient in the opinion of the Minister to justify a prosecution for the offence comes to his knowledge, and for the purposes of this subsection a certificate purported to be signed by the Minister as to the date on which such evidence as aforesaid came to his knowledge shall be conclusive evidence thereof.

(4) Where any medical practitioner or the personal representative of any medical practitioner sells or lets premises previously used by that practitioner for the purposes of his practice to another medical practitioner, or in any other way disposes or procures the disposition of the premises, whether by a single transaction or a series of transactions, so as to enable another practitioner to use the premises for the purposes of his practice, and the consideration for the sale, letting or other disposition is substantially in excess of the consideration which might reasonably have been expected if the premises had not previously been used for the purposes of a medical practice, the sale, letting or other disposition of the premises shall be deemed for the purposes of this section to be a sale by the first medical practitioner or his personal representative of the goodwill or part of the goodwill of the practice of that practitioner to that other practitioner.

Where a medical practitioner or his personal representative sells, lets, or disposes or procures the disposition of, any premises together with any other property, the court shall, for the purposes of this subsection, make such apportionment of the consideration as it thinks just.

(5) Where in pursuance of any partnership agreement between medical practitioners—

(*a*) any valuable consideration, other than the performance of services in the partnership business, is given by a partner or proposed partner as consideration for his being taken into partnership;

(*b*) any valuable consideration is given to a partner, on or in contemplation of his retirement or of his acceptance of a reduced share of the partnership profits, or to the personal representative of a partner on his death, not being consideration in respect of past services of that partner or of property of that partner which is transferred or made available to the other partners or any of them for fair consideration; or

(*c*) services are performed by any partner for a consideration substantially less than those services might reasonably have been expected to be worth;

there shall be deemed for the purposes of this section to have been a sale of the goodwill or part of the goodwill of the practice of any partner to whom or to whose personal representative the consideration or any part thereof is given or, as the case may be, for whose benefit the services are performed, to the partner or each of the partners by or on whose behalf the consideration or any part thereof was given or, as the case may be, the partner who performed the services.

(6) Where any medical practitioner performs services as an assistant to another medical practitioner for a remuneration substantially less than those services might reasonably have been expected to be worth, and subsequently succeeds, whether as the result of a partnership agreement or otherwise, to the practice or any part of the practice of the second practitioner, there shall be deemed for the purposes of this section to have been a sale of the goodwill or part of the goodwill of the said practice by the second practitioner to the first practitioner, unless it is shown that the said remuneration of the first practitioner was not fixed in contemplation of his succeeding to the said practice or any part thereof.

(7) For the purposes of this section—

(*a*) if a medical practitioner or the personal representative of a medical practitioner agrees, for valuable consideration, to do or refrain from doing any act, or allow any act to be done, for the purpose of facilitating the succession of another medical practitioner to the practice or any part of the practice of the first practitioner, the transaction shall be deemed to be a sale of the goodwill or part of the goodwill of that practice by the first practitioner or his personal representative to the second practitioner;

(*b*) If any medical practitioner or any person acting on his behalf gives any valuable consideration to another medical practitioner or the personal representative of another medical practitioner, and the first medical practitioner succeeds or has succeeded, whether before or after the transaction aforesaid, to the practice or any part of the practice of the second practitioner, the transaction shall be deemed to be a sale of the goodwill or part of the goodwill of the practice of the second practitioner by him or by his personal representative to the first practitioner, unless it is shown that the consideration was not given in contemplation or consideration of such succession to the practice or part of the practice aforesaid:

Provided that this subsection shall not apply to anything done in relation to the acquisition of premises for the purposes of a medical practice, or in pursuance of a partnership agreement, or to the performance of services as an assistant to a medical practitioner.

(8) In determining for the purposes of this section the consideration given in respect of any transaction, the court shall have regard to any other transaction appearing to the court to be associated with the first transaction, and shall estimate the total consideration given in respect of both or all the transactions and shall apportion it between those transactions in such manner as it thinks just.

(9) Where any consideration is, with the knowledge and consent of a medical practitioner or his personal representative, given to any other person, and it appears to the court that the medical practitioner or, if he has died, his estate or some person beneficially interested in his estate derives a substantial benefit from the giving of the consideration, the consideration shall be deemed for the purposes of this section to have been given to the medical practitioner or his personal representative, as the case may be.

(10) A prosecution for an offence under this section shall not be instituted without the consent of the Attorney-General.

5. Compensation

36.—(1) *Every medical practitioner whose name is entered on the appointed day on any list of medical practitioners undertaking to provide general medical services shall be entitled to be paid out of moneys provided by Parliament compensation in accordance with this section in respect of any loss suffered by him by reason that he is or will be unable to sell the goodwill of his practice by virtue of the last foregoing section.*

(2) *The aggregate amount of the compensation to be paid under this section shall be the appropriate proportion of sixty-six million pounds, exclusive of any sums paid by way of interest:*

Provided that, if the aggregate number of medical practitioners included on the appointed day in lists of medical practitioners providing general medical services falls short of the prescribed number, the said amount shall be reduced by an amount calculated by multiplying the number by which the said aggregate number falls short as aforesaid by a prescribed amount.

(3) Regulations shall—

(*a*) prescribe the manner in which and the time within which claims for compensation are to be made, and provide for determining whether any claimant has suffered loss by reason of the matters referred to in subsection (1) of this section and, if so, the extent of that loss;

(*b*) provide for the distribution of the said aggregate amount among the persons who have suffered such loss as aforesaid, having regard to the extent of their respective losses;

(*c*) prescribe the manner in which and the times at which the compensation is to be paid, and secure that, except in such circumstances as may be prescribed, it shall not be paid until the retirement or death of the medical practitioner concerned, whichever first occurs; and

(*d*) *provide for paying out of moneys provided by Parliament interest at two and three-quarter per cent. per annum on the amount of the compensation payable to any medical practitioner, in respect of the period from the appointed day until the time when the compensation is paid;*

and before making any regulations under this subsection the Minister shall consult such organizations as may be recognized by him as representing the medical profession.

(4) *For the purpose of determining the appropriate proportion of the said sum of sixty-six million pounds—*

(*a*) *it shall be assumed that provisions corresponding to this section and the last foregoing section will provide for the prohibition of the sale of the goodwill of medical practices in Scotland and for the compensation of persons suffering loss by reason of that prohibition;*

(*b*) *the aggregate amount of the losses in respect of which compensation will be payable under this section and under the corresponding provision for Scotland, respectively, shall be calculated in such manner as the Treasury may direct; and*

(*c*) *the said sum of sixty-six million pounds shall be apportioned as between England and Wales on the one hand and Scotland on the other, having regard to the said respective aggregate losses, and the amount apportioned to England and Wales shall be the appropriate proportion of that sum for the purposes of this section.*

37.—Where the Medical Practices Committee are satisfied, on the application of a medical practitioner or his personal representative, that—

(*a*) the practitioner has retired from practice or died during the period between the passing of this Act and the appointed day; and

(*b*) the goodwill of his practice has not been sold in whole or in part before the appointed day;

the last two foregoing sections shall apply in relation to that medical practitioner and to his practice as if his name were entered on the appointed day on a list of medical practitioners undertaking to provide general medical services.

6. Dispensing

39.—(1) Except as may be provided by regulations, no arrangement shall be made by the Executive Council with a medical practitioner under which he is required or agrees to provide pharmaceutical services to any person to whom he is rendering general medical services.

(2) Except as may be provided by the regulations, no arrangements for the dispensing of medicines shall be made with persons other than persons who are registered pharmacists or are authorized sellers of poisons within the meaning of the Pharmacy and Poisons Act, 1933, and who undertake that all medicines supplied by them under the arrangements made under this Part of this Act shall be dispensed either by or under the direct supervision of a registered pharmacist or by a person who for three years immediately before the sixteenth day of December, nineteen hundred and eleven, acted as a dispenser to a medical practitioner or a public institution.

(3) Nothing in this Act shall interfere with the rights and privileges conferred by the Apothecaries Act, 1815, upon any person qualified under that Act to act as an assistant to any apothecary in compounding and dispensing medicines.

7. Powers of Minister where Services are Inadequate

43. If the Minister is satisfied, after such inquiry as he may think fit, as respects any area or part of an area of an Executive Council that the persons included in any list prepared under this Part of this Act—

(*a*) of medical practitioners undertaking to provide general medical services; or

(*b*) of persons undertaking to provide pharmaceutical services; or

(*c*) of dental practitioners undertaking to provide general dental services,

are not such as to secure the adequate provision of the services in question in that area or part, or that for any other reason any considerable number of persons in any such area or part are not receiving satisfactory services under the arrangements in force under this Part of this Act, he may authorize the Executive Council to make such other arrangements as he may approve, or may himself make other arrangements, and for the purpose of such other arrangements he may dispense with any of the requirements of regulations made under this Part of this Act.

8. Powers of Minister to Make Regulations (Clause 69 (3))

(3) Any power conferred on the Minister by this Act to make regulations shall, if the Treasury so direct, not be exercisable except in conjunction with the Treasury.

NATIONAL HEALTH SERVICE

GOVERNMENT PROPOSALS TO TAKE OVER VOLUNTARY AND MUNICIPAL HOSPITALS

The following statement has been issued by Lord Latham, Leader of the London County Council.

It is generally accepted that a National Health Service freely available to all is an essential part of any satisfactory scheme of social security and that such a service must include adequate facilities for hospital and similar treatment for all who need it, wherever they may live.

There are at present in this country two parallel hospital systems: the voluntary hospitals, which provide about 77,000 beds, and the municipal hospitals, which provide about 196,000 beds. These figures do not include 189,000 mental hospital beds, almost all of which are provided by local authorities. The Government has decided that the two systems must be co-ordinated into one unified system under national ownership and financed from national funds. To achieve this, the Government proposes to take over all the existing public hospitals, voluntary and municipal, including mental hospitals, and to administer them on a regional basis through Regional Hospital Boards and, for day-to-day management, by local Hospital Management Committees.

It is clear that, since free hospital and ancillary treatment is to be the right of all, towards which all will contribute through the scheme of National Insurance, the Government is bound to provide the necessary facilities and cannot leave one sector of the service to hospitals dependent upon private benevolence, Hospital Savings Association and Hospital Saturday Fund contributions, etc., flag-days and the like. Moreover, when everyone is required to contribute, much of the income from these sources will diminish and ultimately cease for all practical purposes. Thus the voluntary hospitals would not be able to finance the facilities which they will be called upon to provide without becoming increasingly dependent upon contributions from public funds, which will constitute the bulk of their income. Now it is a sound and salutary tradition in this country that where public money is used there must be proper public accountability. Furthermore, the practice of nomination and patronage for entry into voluntary hospitals could not continue side by side with the individual right of every insured person to hospital treatment for himself and his family

Voluntary hospitals have done fine work and have provided a field for personal service and devoted activity by large numbers of people from all walks of life. But new conditions require new means and ways. There will always be abundant opportunities for voluntary service in many fields of social activity where such service is so valuable. But the proposal to take over the voluntary hospitals involves the future of the

municipal hospitals. Clearly, there cannot continue to be two systems—one of the former voluntary hospitals and another of municipal hospitals. The Government has accordingly decided that it must also take over the municipal hospitals as the only satisfactory way to secure an integrated hospital system, organized on a national basis so as to provide a fair distribution of facilities over the whole of the country, which is far from being the case at present. This will mean that the London County Council will lose its great system of municipal hospitals, which has been welded into a fine hospital service for Londoners, who are greatly attached to and rightly proud of them. They regard them as their hospitals, and so they are. The London County Council has devoted much thought and effort towards making these hospitals—general, special, and mental—the finest in the world. In February of this year big comprehensive plans were approved by the Council for the repair and restoration of damage done by enemy action and for the further enlargement, modernization, and improvement of its many hospitals. It can, therefore, be appreciated with what feelings of regret we shall see them pass from us to the ownership of the State and to their administration by Regional Boards.

I am a local government man; a very large share of my public activities over the past 25 years has been in the field of local government. I believe that local self-government is an essential and valuable part of the governing and administrative structure of this country, which must be preserved if local democracy is to continue and too much centralized government is to be avoided. Encroachment by the central government on the field of local government activities is always regrettable, and appointed Regional Boards are no substitute for popularly elected local authorities. But what is the position that we face? Existing local government units in the country generally do not coincide with what would be satisfactory units for hospital services. Hospital accommodation over the country is inadequate and is also badly distributed in relation to needs: there is concentration in some parts and a grave shortage in many others. In the County of London, for example, there is a large number of both municipal and voluntary hospitals, including twelve teaching hospitals, whereas in other parts of Greater London hospital accommodation is insufficient. If the needs of the people are to be fairly met in the future, existing hospitals must be organized and additional ones located so as to serve much wider areas than the County of London or, maybe, Greater London.

So we must view this matter from the broad standpoint of the greatest service to the greatest number—as I am sure all good Londoners would wish. All persons of good will will agree that if an efficient National Health Service is to be established it must be based upon the provision of hospital facilities for all, with the care and well-being of the patients as the first consideration. With these considerations in mind the Majority Party on the London County Council will support the main principles of the Government's proposals as regards taking over all the public hospitals, voluntary and municipal. The London County Council will, of course, insist that the interests of the people of London are fully safeguarded; that there is adequate representation drawn from the London County Council on the proposed Regional Hospital Boards and local Hospital Management Committees, and that in the future administration of the hospitals the needs of the people of London are properly provided for.

Meantime, the London County Council will continue to run its hospitals for the people of London and will pursue with undiminished vigour the work of development and improvement of them.

Londoners are a fine people—their conduct during the war showed this—and I am convinced that they would not wish for narrow selfish reasons to stand in the way of the establishment of a national hospital service freely and fairly available to others in common with themselves. In this supreme matter of the better health of the nation they will be ready to make their contribution—and it is a great one—feeling, however, regretfully, that it is the right and proper thing to do.

LATHAM,
Leader of the London County Council.

The County Hall,
Westminster Bridge, S.E.1.
March 21, 1946.

Correspondence

Foundations of a First-class Medical Service

SIR,—Much of what has been written on the first-class health service for all refers to the sensational subject of "directing" medical talent. An even distribution of doctors through the population is, however, but one of the many reforms entailed. Others, equally pertinent, need prominence.

1. *Numbers.*—The number of doctors needs to be doubled if the essential early diagnosis and efficient treatment are to be meted out to all and sundry. Training a doctor takes about seven years, yet we hear little about schemes to cope with the necessary expansion of the medical schools. Nor shall we raise the standard of our service without doubling the number of our allies of the nursing profession.

2. *Students' Curriculum.*—Medical science, like other sciences, grows prodigiously in this century and in one branch after another. Teachers, consumed with its wonders, have lost a sense of proportion and leave the students no time to develop wisdom and the art of medicine. They assume it is obligatory to pile each new discovery on to the unmanageable load of learning. But much of the detail and of what is new is only of academic interest or useful to the specialist and out of place in the daily round of a family doctor, never entering his mind after he leaves hospital. A radical revision of the syllabus is urgently needed, with diagnosis as the dominant aim, to restore more hours at bedside and out-patient clinics and lessen time at lectures, laboratory, and operating theatre. Mankind's marvels in collective massing and transmitting of scientific knowledge must not make us forget that the brain of the individual remains bounded by an inexpansile cranium. Much of the almost universal contempt for physiology in daily life is due to our obsession with the current outpouring of the products of science. The doctor and the public need arming against the seductive misguidance on the hoardings which makes a mockery of medical education and the salutary prohibition of which has not so far even been hinted at by the Government.

3. *Good Hospital Conditions.*—Even granted a well-balanced training for medical men, bad conditions prevent first-class practice. Constantly having to make shift with low standards and debarred from his proper professional pursuits, a doctor tends naturally to lose enthusiasm and ideals. He longs for the following.

(*a*) General-practice annexes to hospitals.—He often wants accommodation for patients who need nursing for a few days or weeks. The patient is suddenly ill, requires a bed and waiting on, but, for lack of domiciliary aid, tries to struggle on, with the result that effective application of treatment is uncertain. In another case obscure symptoms call for a few days' close observation under carefully regulated conditions; or initiating a special treatment similarly depends on nursing aid. In every suburb a large house, suitably adapted, with some 20 to 30 beds, would provide the necessary facilities, and yet this is denied the urban doctor, although his country colleague has his cottage hospital. A move in this matter by the Government is another proof we want that a first-class service is in the making.

(*b*) More general hospital accommodation.—This is woefully short. Thousands of patients, many the victims of cancer, have to wait months and even years with major ills the treatment of which depends on the special facilities and elaborate equipment of large hospitals. A doctor may well wonder whether the effort of diagnosis or consulting with specialists on such cases is justified when it merely leads to a "waiting list." Certainly it seems futile humbug to preach the importance of detecting cancer early, leave alone sending a merely suspicious case to the specialist, when those with late disease are left advancing. Life is at stake; we want plans for the requisite additional accommodation (including that for private patients) clearly foreshadowed before we doctors can believe the words, "a first-class service," are coming true.

What does history teach us? In 1911 Lloyd George's scheme won a place on the Statute Book as a "*National* Health Insurance." What a fraud, as it catered for only a minority of the people. Don't let the B.M.A. be fobbed off this time merely with the promise of an even distribution of doctors, and let down patients and profession by accepting, as "first-class," conditions of service under which good work is simply impossible. Let our demands for our patients be clear and inexorable. Of course we want equal distribution, but not of

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"rotten eggs." The battle with disease is still "on," slaying a few hundred thousand Britons annually; let us apply to the campaign the moral of Field-Marshal Montgomery's words of high praise of the medical services in the Army: ". . . great work done by our doctors . . . as a result of the immense pains taken our great armies in B.L.A. were far healthier than the armies of the last war.—I am, etc.,

Bristol. A. WILFRID ADAMS.

B.C.G. Vaccination

SIR,—How fares B.C.G. vaccination against tuberculosis in England? In the Scandinavian countries it has gone from strength to strength since its introduction there about 1927. Its sponsors in these countries have not been obscure, wild-eyed, bagging-at-the-knee enthusiasts but acknowledged leaders in the Scandinavian medical world—Dr. Heimbeck and Dr. Scheel in Norway, the bacteriologist Prof. K. A. Jensen in Denmark, Prof. Arvid Wallgren in Sweden, and many other men with a hard-earned reputation for critical discrimination. It is an illuminating sign of the times that in *Nordisk Medicin* for Jan. 18 of this year Dr. S. Rydén (who deals with some 1,500 vaccinations) says, the stage at which one discussed the risks of B.C.G. having been passed, the questions now remaining to be answered are: whom to vaccinate, and how long does the immunity conferred by B.C.G. last? The papers published in Scandinavia during and after the war on the parenteral administration of B.C.G. have made me wonder what is happening in England now with regard to it. Is it possible that we have been caught napping as we were nearly 30 years ago over the introduction of artificial pneumothorax treatment into England? Has England an intelligent Intelligence Service operating so efficiently that important advances abroad in medicine in general and tuberculosis in particular are promptly brought to the attention of, and if necessary rubbed into, all concerned at home?—I am, etc.,

Leitet, Sunnfjord, Norway. CLAUDE LILLINGSTON.

⁂ An annotation on B.C.G. vaccination, describing the Norwegian work, appeared in the *Journal* of Feb. 6, 1943 (p. 167). The subject was again reviewed at length in a leading article, "Immunization Against Tuberculosis," in the *Journal* of Dec. 4, 1943 (p. 716), in which we stated this: "To those familiar with the Norwegian work in particular, it may well seem that the experimental period even in man is already over, and that nothing remains but to apply the method at whatever age, on whatever scale, and in whatever classes of persons the circumstances demand." Apparently England has an "intelligent Intelligence Service."—ED., *B.M.J.*

Tuberculin Therapy

SIR,—The obituary notice of Dr. W. Camac Wilkinson (March 2, p. 335) seems to imply that tuberculin therapy has come to an end now that Camac Wilkinson is dead. This is not so. I am still using tuberculin, and getting at least as good results with it as are got by the collapse methods now in use in sanatoria. I say this with knowledge, for I try to keep in touch with all survivors who have suffered from pulmonary tuberculosis in County Down from 1912 onwards, and can compare the results in cases treated in sanatoria with those in cases treated with tuberculin at our dispensaries. The percentage of the latter at work after 5, 10, or more years is quite as good as the percentage of the former.

I agree with Camac Wilkinson that tuberculin has not had a fair trial. The crux of the whole thing is the dosage. This needs to be adapted to each patient, and there are enormous differences in the doses and the ratio of increase of dose that are best in different cases.

In 1932, being the jubilee of the discovery of the tubercle bacillus, the B.M.A. at its meeting in London had a Tuberculosis Section at which a morning session was given to tuberculin in diagnosis and treatment. The opener on treatment mentioned a series of doses which he had used, giving the same series to all patients. This I should expect to do more harm than good, but he concluded by saying that he thought tuberculin was worthy of further trial. Later, when his paper was published in the *Journal*, I wrote pointing out the absurdity of the method of administering tuberculin. But the author replied that if he were to be criticized in that way he would not use tuberculin any more. This is a fair example of how tuberculin has been abandoned by people prominent in the profession. As a result students are taught that tuberculin is useless and even dangerous, and are given no opportunity of seeing it properly administered. Of course, to use it without knowledge of how it should be employed would be apt to do more harm than good.—I am, etc.,

Tuberculosis Department, Down County Council, Belfast. JOHN R. GILLESPIE.

Suprapubic Drainage of the Bladder

SIR,—Mr. E. W. Sheaf's instructive letter (March 2, p. 331) should call for a record of the experiences of other surgeons. Not many will steer so old a patient to safety in such a serious pathological complication.

I always taught that suprapubic puncture of the bladder should be done with a local analgesic and visually—because it presented traps for the unwary to fall into. The first is that the back of the peritoneal fold may be adherent to the bladder, and that surface of it may be torn even without this being noticed. The only evident indication of such an accident may be a slight releasing of the gentle, upward, gauze traction. The second trap occurs if the bladder empties rapidly while the De Pezzer tube is being inserted, as may easily happen when some of the causes of such delay are in action. The bladder may then retract off the cannula, and then where are you? The upward and backward direction of the trocar not only is safer but seems to lead to a more rapid closure, by a slow, sliding-shutter action when the catheter is left out.

Thirdly, the best place for puncture seems to be in the middle line just above the pubis, because it suits every size and condition of bladder.—I am, etc.,

London, W.1. G. H. COLT.

Pathogenesis of Non-specific Mesenteric Lymphadenitis

SIR,—Mr. Ian Aird's communication (Nov. 17, 1945, p. 680) anticipated an article on this subject, now in course of preparation, wherein I shall proceed to elaborate on certain features observed in relationship to "chronic" appendicitis, mesenteric lymphadenitis, and threadworm infestation of the alimentary tract. It was some years ago at the Royal Hospital for Sick Children, Glasgow, that I noticed that every appendix which I removed during the months of January, February, and March, and during the first two weeks in April, of a particular year, contained threadworms, and this was the case even in such appendices as were frankly acute. Mesenteric glands, enlarged to the size of hazel-nuts, were a constant finding in each case, and my interest in the frequency of this association was initiated.

Since then, with an eye on the lookout for threadworms, I have estimated that approximately 70% of these chronic or "normal" appendices, removed during laparotomy because of abdominal pain, tenderness, etc., and associated with mesenteric glandular enlargement, contained threadworms, and during the last few years I have made a point of demonstrating the "threadworm abdomen" to students attending the hospital. Most of these were in the first instance referred by their own doctors to my out-patient clinic as cases of chronic appendicitis. Mr. Aird has given ample details of their symptoms, signs, and preceding history, but I might add that most of them, instead of giving a history of a few previous attacks, complain of many brief attacks of pain over a period of six months to a year, unrelieved by any long intervals of freedom which could be measured in weeks or months. I think Mr. Aird's article passed somewhat briefly over the frequency of nausea and vomiting in such cases—facts which cannot be disposed of lightly when assessing the need for operation.

It should be noted that children suffering from threadworm infestation are not being submitted indiscriminately to operation. Each of these patients is being questioned on such matters as: "Do you get an itchy bottom?" The parents are asked: "Has the child now got, or did the child or any other member of the family have, threadworms at any time?" The examination of the patient includes firm separation of the buttocks to inspect the anus, which sometimes

relaxes into a patent state. Often enough one or more threadworms may appear obligingly to confirm the suspicion of their presence. Cases with a negative history are sent to the ward for an enema, and if the result is negative and other features are not urgent the child is dispatched home, the parent being instructed to observe every motion passed by the child during the following week. Where threadworms are stated to be present, or proved to be so by enema or by observation, medical treatment is instituted. A proportion of these cases continue to complain of abdominal pain in spite of the fact that threadworms have disappeared from the motions, etc., and they are thereupon included in the category of those cases of abdominal pain requiring admission for laparotomy.

To support my contention that mesenteric lymphadenitis (non-specific) is due in the main to the presence of threadworms in the alimentary tract I shall quote from the appendicectomy records of one of the two surgical units of the Royal Hospital for Sick Children, Glasgow. The figures for the year 1943 are selected, as during that year reasonably accurate observations were made for the presence or absence of infestation.

226 appendicectomies were performed. Of these, 123 were acute, and 103 were chronic or "normal."

Of the chronic 103, 63 contained threadworms. Of the 40 which did not contain threadworms, 6 had previous histories of having had threadworms. Of the 34 without any history or sign of threadworms, 10 case sheets do not indicate that any search was made of the contents of the appendix.

My estimation of the frequency of the association of enlarged glands and infestation is borne out by these figures. Where, on the other hand, the glands are enlarged to the size of a cooked haricot bean, in all probability the aetiological factor is something in the nature of a more acute or virulent infection. To conclude as briefly as possible, the so-called "normal" appendix in threadworm infestation has a characteristic appearance, which, I persuade myself, I can recognize from the outside. Some infestations cannot be cleared up medically, and appendicectomy is necessary. Related issues in regard to the foregoing and in regard to the disappearance of symptoms after appendicectomy will be elaborated later.

Meantime, in regard to the correspondence which has arisen in response to Mr. Aird's communication, I favour those who for safety's sake perform laparotomy where there are abdominal pain, vomiting, and tenderness in the right iliac fossa and elsewhere, as in less experienced hands many an acute surgical emergency would be misdiagnosed were his precepts too rigidly followed.—I am, etc.,

Glasgow. ANDREW P. LAIRD.

Fractured Bone Graft

SIR,—In the article on survival of cortical bone after grafting, by Mr. David Brown (March 16, p. 389), there is a reproduction of an *x*-ray film which claims to show union of a fractured bone graft (Fig. 2). In truth the illustration shows an obvious well-marked *un*united synostosis with sclerosis on each side. This "fracture" is not quite at right angles to the film, so that bone does show through the gap, but the gap is so clear-cut that it is difficult to understand how it could be stated that there is union. In the film of the state of the bone fourteen months after operation one can see the half-inch of the shaft which has not survived is an aseptic sequestrum and will absorb, so producing the radial deviation mentioned. The "fracture" was really the separation of this necrosing bone at its lower end. Close inspection half an inch (1.25 cm.) above this level shows the upper end of the separating fragment and even the outline of the future upper component of the synostosis.—I am, etc.,

Newcastle-upon-Tyne. FRANK STABLER.

Acute Pancreatitis

SIR,—I was very interested in Mr. Norman Godfrey's article (Feb. 9, p. 203) on acute pancreatitis, and also in the case reported by Mr. Hiren De (March 9, p. 367).

I well recall a female patient of under 40 being admitted to hospital in a state of profound collapse, following a severe attack of abdominal pain. A tentative diagnosis of acute pancreatitis was made; the urinary diastase index was 500. Any surgical intervention during the state of profound collapse was out of the question, and the patient was treated with morphine to relieve the intense pain, and a glucose-saline intravenous drip. Steady improvement was made and the following day the diastase index was 400, and it continued to fall until it was normal, five days later. Recovery was uneventful, and four months later cholecystectomy was carried out, several stones of the mixed type being present in the gall-bladder. Examination of the pancreas did not reveal any definite abnormality. The recovery of this case so impressed me that I feel it is wiser to abstain from surgery in acute pancreatitis—if one can be satisfied as regards the diagnosis—but many cases fall into that group of acute abdomens in which the precise diagnosis is in doubt, and in these cases operation must be undertaken. This case was treated about twelve years ago and no sulphonamide drugs were used.

I was interested to see that the urinary diastase in the case reported by Mr. Hiren De was 500 on the day after operation. I have several times had the diastatic index estimated in the first specimens of urine passed after laparotomy and drainage for acute pancreatitis, and always found it normal. Had this patient been a little less ill, surgical intervention would have been carried out, with perhaps a less happy ending.—I am, etc.,

Lewisham Hospital. J. JEMSON.

Cardiac Beriberi

SIR,—We were most interested to read Dr. Brunel Hawes's letter (March 9, p. 366), in which he stated that the immediate response to thiamine can be regarded as a diagnostic test in a case of beriberi heart. In spite of being unaware of this fact, it was the extraordinary response to thiamine which made us consider that the case we published might have fallen into this category. True the child did not inform us she felt better in three minutes, but this is not surprising as she was suffering from terror and spoke only Polish. Also at first we had to give her B_1 by mouth as we had no concentrated solution for injection. Her whole appearance, however, changed in a few days from one of extreme torpor to comparative well-being, while the heart symptoms cleared up and the heart regained its normal size with great rapidity. Hence his letter tends to confirm the opinion which we formed, together with the distinguished Swedish physicians who saw the case.

Several other points in Dr. Hawes's letter we find somewhat intriguing. It is interesting to speculate on the identity of the medical school where in the old days students were constantly ploughed in the finals for bringing up the subject of beriberi and where now they are congratulated by the examiners when they do. We are at a loss to understand, however, why "those stout little girls—housemaids, wardmaids, and probationer nurses—with chlorosis" should have their memory "drowned in a meaningless past," or indeed how a meaningless past can be drowned, or, if drowned, how it can be remembered.—We are, etc.,

ROBERT COLLIS.
P. C. MACCLANCY.

Dublin.

Psychological Reaction to Loss of One Eye

SIR,—The *Journal* of Feb. 2 has just reached me and I have read the article on the above subject by Lady Duke-Elder and Dr. E. Wittkower (p. 155) with great interest. As one who lost his right eye by enemy action in April, 1941, may I be permitted to make some comments upon their views.

If the article were written as "treatment" and for the encouragement of one-eyed patients then its tone would be acceptable, but as a contribution to a scientific journal, to be read largely by those having the management of such patients, I feel that it is biased on the side of making far too light of the loss of stereoscopic vision.

It is true that it is during the first six months that the difficulty of judging distances is most felt; by the end of that time one has learnt various tips to compensate for the loss of stereopsis, such as always to look *down* on the cup you are filling, never *across* it. But after nearly five years I still have not devised a method of distinguishing quickly the "insect near" from "the bird far away." Similarly, vision at night, when the

employment of the parallax error to judge distances becomes very difficult, driving or even movement on foot becomes much more hazardous. In spite of the well-intentioned encouragement of scores of friends who say, "Oh, you'll get used to it," I do not feel that anything approaching full compensation of distance-judging can ever be obtained. I suspect those who say it either are not being honest with themselves or were very undiscerning when they had their two eyes.

I have made no reference to the embarrassment of disfigurement, which admittedly is only great if one allows it to be, but I feel the profession is in danger of being too harsh if it sweeps aside the complaints of monocular persons that they cannot judge distances, and accepts the statement made by the writers that the psychological effect of the loss of an eye is out of proportion to the actual physical disability.

I should very much like to know whether either of the authors has been permanently deprived of stereoscopic vision. I think it is agreed that no man can honestly psycho-analyse himself, and I shall not attempt to assess my emotional reaction to the loss; probably after reading this letter I shall be adjudged as a gross case of class *c*—self-centred, self-pitying anxiety.—I am, etc.,

Bombay. PAUL T. MERLIN.

Our War Chest

SIR,—The *Journal* of March 9 contains a challenge and a message of hope to all who have the true interests of medicine at heart. The restraint and calm semi-obscurity of the announcement of the Emergency Guarantee Fund contrasts with the publicity it received in several daily papers.

Sir Ernest Graham-Little is only too right in his remarks about the flooding of the medical labour market with suddenly released Service medical officers. As one of them, I find that Ministerial thunderings have made the purchase of a practice or a partnership at this juncture too perilous. Specialization is thwarted because the specialist training posts are engulfed by the same flood, and a married man cannot live on a house-physician's salary. Many of us were waiting with disillusioned gloom for the onset of the threatened State medical service as a means, however distasteful, of getting a living. We felt that the B.M.A. would not fight, and the impertinence of Messrs. Laski and Bevan encouraged this fear. Now we know where we stand. The profession may not yet be showing its teeth, but it is getting them scaled.

Medicine and politics do not mix. Because the Socialist Medical Association is becoming an example of Socialism rather than medicine we must remain the British Medical Association, not Conservative, Liberal, Communist, or Fascist. If a project concerns medicine we are affected, and should support or oppose it on its merits regardless of its political sponsors.

It may be said that Fund A is not needed. Certainly some of the Opposition newspapers would subsidize our propaganda free. By paying for it ourselves we remain independent, and the public, whose wish in the end must prevail, will see that our motives are non-political. Our hands are very clean. What trade union leaders would "negotiate," as ours have done, with the Minister and keep their promise not to divulge his projects to their own supporters until the Minister has spoken? The present Government has had enough experience of strikes in the most vital industries to know that its chosen weapon of other days is open to all. It is not for the trusted family doctor to become an agitator for any policy. The consulting-room and waiting-room are not political platforms. It is different if the patient, interested in the issue as raised in the press or elsewhere, asks for his doctor's opinion. If that opinion is not given unasked it will be respected.

Now we come to Fund B. This is literally the measure of our loyalty, not only to ourselves but to our principles. It is the price we are prepared to pay to gain a new and better medicine instead of bureaucratic slavery. On our support of this fund and the B.M.A. we rest our hopes of a brave new world. It is our chance—perhaps our last one—of raising our prestige to new heights in the eyes of the whole country and of our colleagues throughout the world.—I am, etc.,

Haigh, Lancs. J. L. BROWN.

The Minister Listens

SIR,—Dr. P. G. S. Davis (March 16, p. 411) contends that "some 40,000,000" of our people are united in the "attempt" to coerce "some 50,000 doctors" into accepting proposals which the vast majority of those doctors sincerely believe will worsen, rather than better, the nation's health and happiness. Dr. Davis goes one better than the egregious Prof. Laski, who has declared that he would not allow the House of Lords to interfere with the will of "30,000,000 electors." These wild exaggerations look particularly foolish when one examines the authentic figures. Not more than some 27,000,000 votes were recorded in the last election, and of those only 11,992,222 supported Socialism.

And how should doctors, who are not stonemasons, proceed to "shape a milestone," as Dr. Davis, in his penultimate sentence, exhorts them to do?—I am, etc.,

House of Commons. E. GRAHAM-LITTLE.

Homosexuality

SIR,—The amount of prejudice and extreme emotional reaction engendered by this word is quite remarkable. Surely the solution of the difficulty is to establish an age of consent for boys as well as girls, and, if it seems desirable, increase the severity of punishment for all sexual assault or seduction under this age. This would protect all children of both sexes from premature sexual interference, which probably everyone would regard as harmful to their future adjustment to life and society. Such a law would protect boys from corruption not only by their own sex but also by women.

I have recently had a case of a young man about whom I heard twelve years ago, though he himself did not come under my care. At the age of 11 he was seduced by the mother of a schoolfellow. Intercourse took place regularly for two years and the lady stated to her friends that he was the father of twins to which she gave birth. Finally in a fit of jealousy she accused this boy of interfering with a girl of 13 without the shadow of proof. This led to the woman being charged, but the court did not see fit, or was not able, to convict her. Not unnaturally the boy grew up to a life of extreme sexual instability and has already served a Borstal sentence for improper conduct.

It is time that all children should be protected from homosexuals of both sexes, but boys as well as girls should be saved from heterosexual experiences such as the one referred to above, which are not so uncommon as some sensitive-minded readers would like to imagine.—I am, etc.,

Bath. R. G. GORDON.

SIR,—This discussion seems to have reached a stage where an attempt might be made to take a realistic and practical view of the problem. If I am didactic it is for the sake of brevity.

Homosexuality is a state of mind and is ignored by the law. Sodomy is a physical act which in this country is always illegal. A bugger is a sodomite (see *Oxford Dictionary*). Many homosexuals are not sodomites; many sodomites are not genuine homosexuals. If a sodomite keeps the rules which apply to normal intercourse the police will have little chance to intervene.

In all the many cases I have seen as a police surgeon the victim was either unwilling or under the age of consent, or the performance was in a public place. It follows that if the law was altered to place homesexual and heterosexual practices on an equality the change would make little difference in practice, but would go far to scotch the idea that homosexuals as such are persecuted.

Your first correspondent made the astounding assertion that most homosexuals can be cured. If this means that after Nature has adjusted most youths of homosexual tendencies the majority of the residue can be cured, then the statement is untrue. It is even doubtful if psychotherapy has any notable effect. The number of homosexuals is large, but the proportion indicted for sodomy is small. How can it be further reduced? I suggest: (1) by equalizing the law between homosexuals and heterosexuals; (2) by providing first offenders with suitable treatment; (3) by dealing surgically with brutal or persistent offenders.—I am, etc.,

Plymouth. S. K. MCKEE.

Stethoscope versus X Rays

SIR,—With reference to the correspondence "Stethoscope *versus X* Rays," which has been pursued so vigorously in your *Journal*, I should like to point out that, in my opinion, the whole controversy is based upon a logical error, for if, on the one hand, the *x*-ray picture is taken as a faithful representation of structural lesions which we seek to recognize by clinical methods, then this picture must be accepted as the final criterion of truth, with the result that the physical signs (or clinical manifestations) must necessarily be misleading in a certain percentage of cases. If, on the other hand, the physical signs (or clinical manifestations) are taken as the faithful representation of the structural lesions, then they must be considered as the final truth, with the result that the *x*-ray picture must necessarily be misleading in a certain percentage of cases.

Since, as already mentioned, it is by clinical methods that we endeavour to detect structural lesions—i.e., lesions which, generally speaking, can be strictly defined only by anatomical methods—the diagnosis of these lesions by other than anatomical methods must be based on the correlation of clinical data with anatomical data. Since there has not yet been any reliable statistical work done on the correlation of physical signs (or clinical manifestations) with lesions, or of *x*-ray pictures with these lesions, it is impossible at present to decide which method gives more accurate results.

This correspondence is symptomatic of the confusion of thought which pervades the whole structure of medicine, and bears witness to the need for a revision of its fundamentals, which in turn would be bound to have a profound influence upon the present medical scheme.—I am, etc.,

Polish School of Medicine, University of Edinburgh. ANTONY FIDLER.

SIR,—Dr. F. Kellermann's second letter (Feb. 2) so grossly misrepresents the real issue, and is so contemptuous in its tone, that I crave your indulgence for a few words of remonstrance. No competent clinician would dream of using the stethoscope to the exclusion of all other clinical evidence, nor is it conceivable that this was in the minds of members of the Royal Society of Medicine at their much-discussed debate on Nov. 27 last. As Dr. R. C. Hutchinson said in his letter (Jan. 5), which started this discussion: "Most of the speakers obviously felt the limitations of the title ["Stethoscope *v. X* Rays"] and included in their remarks the full range of physical examination. Several appear to be thinking in terms of early tuberculosis, in which no one would dispute the pre-eminent value of radiology." Dr. Kellermann says that the subject of the debate "can be summarized in two questions with two simple answers." Let us take each question and answer in turn:

"*Question 1.*—What evidence of pulmonary disease can be detected by auscultation which could not be detected by *x* rays? *Answer.*—Rhonchi and pleural friction-rub." No sound clinician would take "rhonchi" and "pleural friction-rub" as specially distinctive of pulmonary tuberculosis (which is the disease more particularly in question). Does then Dr. Kellermann mean to imply that the other and more distinctive signs, such as crepitations, rales, post-tussive crepitations (so often missed because the examiner will not take the trouble to get the patient to cough), prolonged expiratory breath-sounds, increased vocal resonance, etc., are never found without *x*-ray evidence being also always obtained? If so, there are numerous cases—as this discussion has brought out—which disprove such a contention. Further, to depart from tuberculous disease only, auscultation can give evidence of bronchiectasis, where *x*-ray evidence may be negative.

"*Question 2.*—What evidence of pulmonary disease can be detected by *x* rays which could not be detected by auscultation? *Answer.*—Innumerable." This is bad English, but, letting that pass, would many radiologists and clinicians admit the "innumerable"? This illustrates very well one of the remarks made by Dr. C. A. Birch at the debate: "Instruments passed through three stages: extravagant claims, severe criticism, general use until ousted by a better method." If "the stethoscope was now in the third stage" he might equally well have added: "The *x* rays are now in the first stage"; i.e., that of extravagant claims. One radiologist of distinction would not agree with the claims made by Dr. Kellermann (see letter from Dr. J. F. Brailsford, March 2), but perhaps in Dr. Kellermann's estimation Dr. Brailsford, although he speaks as a radiologist, is included among those whom Dr. Kellermann contemptuously likens to "a fifth-rate provincial soccer club."

It seems impossible to make Dr. Kellermann understand that those who believe that the stethoscope still has a useful place do *not* undervalue the importance of *x* rays. Here is the real essence of the misunderstanding. No good tuberculosis officer to-day would fail to make use of *x* rays because auscultation gave no evidence, and one would have thought that no competent teacher would allow medical students to suppose that because auscultation was negative, therefore—in a suspicious case—*x*-ray examination was unnecessary, any more than he would teach that a negative sputum examination meant that tuberculosis was not present. Dr. James Maxwell, Dr. Peter Kerley, and Dr. Geoffrey Marshall must feel grateful to Dr. Kellermann for his support, but in invoking their authority let not the unwary be led to infer that the stethoscope is an obsolete instrument. This is by no means the case. In the report of the debate (*Journal*, Dec. 15, 1945, p. 856) we read: "Dr. Peter Kerley said that the rash statement was made from time to time that the stethoscope was obsolete: no experienced radiologist would agree with that." Dr. James Maxwell, in a reply to Dr. Hutchinson, says: "Nobody would deny that physical examination has its place, but the time has come when physical examination and radiography must be brought together, and teaching must be based upon the intelligent combination of all methods of examination," which would include auscultation. This is a very different attitude from that of Dr. Kellermann.

In short, to quote Dr. Kellermann, "Don't let us confuse the issue," as he himself has done. The question at issue is simply this: Is the stethoscope still useful in cases of suspected lung disease, or is it to be discarded as superfluous, because *x* rays (as in Dr. Kellermann's view) will give all the information required. His gibes at those who believe the stethoscope to be still useful come with an ill grace from one who is a comparatively recent recruit to the ranks of public health tuberculosis workers. The writer of the letter which initiated the discussion was some years ago medical superintendent at one of our foremost sanatoria (to which, by the way, I believe Dr. Geoffrey Marshall holds the appointment of physician); Dr. Brailsford is a well-known radiologist; and both of these, as well as others who have taken part in this discussion, may well be supposed to have had a very much greater experience of both the clinical and the radiological side of pulmonary tuberculosis diagnosis.—I am, etc.,

Tunbridge Wells. E. WEATHERHEAD.

Penicillin and Pursers

SIR,—Although I entirely agree with Dr. O. P. Clark (March 16, p. 408) that penicillin might well be released in small quantities for general use so that experienced practitioners could use it with advantage in obviously suitable cases, I have perhaps misled him by over-condensing my article about surgery at sea (Feb. 16, p. 244).

The pursers aboard American Liberty and Victory ships, after receiving an intensive course of instruction in advanced first-aid treatment, take an examination which qualifies them as a pharmacist's mate. This peculiar status entitles them to the freedom of the ship's medicine chest, which will always contain adequate quantities of sulphathiazole and sulphadiazine. These drugs are kept almost exclusively for the treatment of gonorrhoea as described in my article. In this and other febrile conditions the exact indications for the use of sulpha drugs and their dosage are laid down in a special handbook, and a purser who tried experiments on his own would probably lose his licence. A further licence is required to give penicillin, and I believe that its use is restricted to the treatment of simple gonorrhoea as described. As there are nearly always some victims of what the poet once called "love's tourney" on board, this complaint rather dominates the mental horizon, and it is news to the average purser that penicillin can be a life-saver in acute appendicitis. He would certainly never give it empirically without definite instructions from a rescue ship or visiting doctor, and I have always been required to put my instructions for its use in writing.

Of course the whole scheme derives from the astoundingly rapid development of the American Merchant Navy, and is only justified by the absence of available doctors and by so many emergency cases. In practice it seems to be yielding good results, and the discipline and common sense of the average seaman are well reflected in his careful use of these powerful

drugs. I was, however, told that penicillin was freely on sale in many drug stores in the United States at a dollar a shot (10,000 units). In contrast to all this is the medical equipment of our own Merchant Navy, which is based on that obtaining in Nelson's day, while its contents are administered by the captain, mate, or steward, who have had no medical training whatever. Fortunately their minds, sharpened by the peril of the sea, invariably seem to lead them to the right treatment in real emergency.—I am, etc.,

Walmer. JAMES S. HALL.

Jittery Legs and Happy Feet

SIR,—Perhaps your correspondents on the subject of "jittery legs" would be interested in a brief account of a not dissimilar condition which in its early stages revealed many features in common. I refer to the "painful feet" syndrome which occurred with such frequency among P.O.W.s in the Far East. This distressing condition became a serious scourge within the first year of captivity in Hong Kong, Singapore, and the Philippine Islands in the latter half of 1942, after about six months on a restricted rice and "green-stuff" diet.

The sequence of symptoms complained of was:

1. A feeling of tiredness in the feet, as though a long walk had been undertaken with tight-fitting new shoes.
2. A vague aching which was partially relieved at first by movement—"fidgety feet." This was associated with a tingling sensation, particularly troublesome at night when the increasing severity of the pain prohibited sleep. At this stage there were no abnormal physical signs to be observed.
3. The tingling was progressively followed by a constant "pins and needles," and acute pains described as "burning," or similar to that experienced when first immersing very cold feet in hot water. Some would complain of the whole region from ankle to toes as being very tender, and they would be unable to bear the weight of blankets or wear shoes. Others developed a numbness of the feet, even though the pains continued to become increasingly severe.
4. Sharp shooting spasms would dart up the lower extremity, frequently causing spontaneous groans. This condition became unbearable during the hours of darkness. Relief would be obtained by constant walking about, until utter weariness would permit of short snatches of sleep. Or soaking the feet in cold water would give sufficient respite to enable some rest to be obtained.

It thus became a common sight to see increasing numbers of men limping up and down between the huts, with high-stepping clumsy gait, assisting each other, or supporting themselves with sticks; or again small groups rubbing their feet, some sitting face to face, each massaging the feet of a fellow-sufferer. A stage then developed when the feet became swollen, flushed, hot, and sweating, with general arteriolar dilatation below the knees, or alternatively the lower third of the limb would be cold, swollen, and blue.

Objective symptoms followed: sensory loss affecting first epicritic sensibility, later proprioceptive, ascending stocking-wise up the leg. Superficial and deep reflexes were variable—at first exaggerated, then tending towards impairment or loss in the majority; muscles wasted; the men became haggard and emaciated more rapidly than their unafflicted comrades, nervously exhausted from pain and loss of sleep.

Late in the year I transferred with a draft containing many such cases to Japan. In that first winter there was great distress from this "painful feet" syndrome, which was similarly affecting American P.O.W.s arriving from the Philippine Islands. The cases nearly all showed other manifestations of malnutrition: protein oedema and associated physical signs of avitaminosis, corneal ulceration, stomatitis, cutaneous pellagra, and eczema of the scrotum. Men would sleep with their feet exposed to an air temperature below freezing, or immersed in ice-chilled water. Before these practices could be stopped, cases were being admitted to my care suffering from gangrene of the toes, or occasionally both feet. Others who had lain for weeks with their knees bent up, in order more effectively to massage their affected extremities, developed deformities and contractures of the leg and vertebral column.

Treatment.—Every available type of remedy was tried: rice bran, a fermented flour-sugar mixture believed to contain yeast, various unspecified Japanese vitamin B preparations, a whole host of native black-magic methods, while an unrestrainable Japanese "surgeon" performed so-called lumbar sympathectomy upon eight of my patients, with disastrous results in six of them. By the time American Red Cross medicines, including vitamin concentrates, arrived in 1944 all my cases in Osaka had recovered from the actual "painful feet" syndrome, only the distressing sequelae persisting—loss of toes, or even feet, flat feet, contractures, etc.

This gradual recovery over eighteen months I ascribed to the inclusion of soya beans and barley in the daily ration issued in Japan. I observed no new cases developing in Osaka after 1943, unless they arose in conjunction with a wasting disease—chronic enteritis or pulmonary tuberculosis—in which anorexia led to inability to take even bean congee. No facilities were ever available to investigate these men as they should have been, and all my records and notes on nearly 200 cases were found and destroyed by the Japanese in 1944.

Various names were given to the condition. "Happy feet" seemed the most popular among these very courageous lads. The syndrome was undoubtedly part of the multiplicity of malnutritional states with which we became familiar. I personally believed it to be at least contributed to by a deficiency in essential amino-acids. No specific factor has been implicated to my knowledge, and one awaits with curiosity the reports of those in a better position to investigate and observe the therapeutic response to vitamins. It is extremely unlikely that tobacco played any part in the aetiology, since supplies of cigarettes were always very limited.

In presenting this brief account of "happy feet" one cannot fail to appreciate the similarities which exist between the immersion-foot syndrome and those cases occurring at home, reported and observed by Dr. Audrey Roberts and others.—I am, etc.,

C. A. JACKSON,
London, W.C.1. Late Surg. Lieut., R.N.V.R.

Acroparaesthesia

SIR,—Although only nearing 26, and therefore half the age of the cases Dr. J. Purdon Martin (March 2, p. 307) describes, I beg the opportunity to record a personal observation, and submit an explanation. For the last two years on a number of occasions I have experienced numbness in feet, ankles, and calves, passing on to intense "pins and needles" before returning to normal. This is always regained by voluntary muscular movements, though the knowledge of intense "pins and needles" which I know I shall precipitate has often demanded much effort. The whole episode in my case is over in about five minutes, but nevertheless the condition does have these things in common with the cases described by Dr. Purdon Martin. It always happens some hours after I have taken really severe exercise—i.e., exhausting game of squash or a long walk—and am at rest, absorbed in something. Up till now I have always offered myself this explanation. There has been abnormal pressure on my sciatic nerve, or branches thereof, resulting in an interference with the blood supply to that nerve. The factors contributing to the abnormal pressure, which might well apply both to the upper limbs and to Dr. Purdon Martin's bed cases, being fatigue, muscle hypotonia, and decreased involuntary muscle movement—e.g., very pleasantly physically tired, absorbed in a book, immobility, decreased muscle tone, pressure on the nerve. An additional, perhaps contributing, factor I would suggest might also be the change in the metabolism of muscles following exercise, which I believe may take many hours before returning to normal.—I am, etc.,

M. F. BETHELL,
Surg. Lieut., R.N.V.R.

Physical Therapy in Mental Disorder

SIR,—Although I think that the resentment of Dr. J. A. Ainslie (March 2) and other psychiatrists at my letter (Feb. 16) was caused by my charging certain of their number with behaving like boys who, having been given an electrical gadget, try it on everybody they dare from the cook to the cat—that is to say, with causing unnecessary suffering, with cruelty—and that this resentment has been conveniently channelled into indignation on behalf of Dr. Frank, I should like to explain that all I know about this gentleman comes from his own pen.

In a talented paper in the *Proceedings of the Royal Society of Medicine* (May, 1945) he tells us that all the 650 cases undergoing E.C.T. at Graylingwell Hospital "without exception" dreaded it and that "after 15 to 20 sessions a plateau-type of over-politeness is noticeable which is emotionally shallow and insincere"—that is, they are well cowed; that "a pre-

convulsive aura of annihilation is remembered in cardiazol by patients as lasting endlessly whereas its objective time is from 15 to 30 seconds"—that is, with cardiazol you can die a dozen times; that after leucotomy "a submissive over-polite attitude" is seen in all who recovered. From first to last there is no suggestion that these terrors should restrict or stop the treatments, nor, to be fair to Dr. Frank, in the somewhat salamander discussion that followed is any suggestion recorded.

But there is one sentence in this paper which introduces a new, and to my mind an evil, element, and with this I now confront his supporters. It deals with one type of case, forms a paragraph by itself, and is not concerned with the sentences before or after it; in short it is not unfairly snatched from a context: "Coarse hysterical syndrome in primitive personalities, especially when malingering is superadded, responds well to the very powerful suggestion of electric convulsant therapy paraphernalia, but they react in the same way to other similarly suggestive remedies." In other words, show the poor wretch the rack and he or she "responds." But how do these patients know what E.C.T. apparatus is for? In itself it is no more terrifying than a wireless set. And what are the other suggestive remedies? This is the most disturbing sentence I have read in medical literature. I should like to hear what Dr. Ainslie and the Board of Control think of it and all that it implies. It seems to me to strike at the very soul of medicine as it is understood in this country. Here are two points of view between which there can be no compromise.—I am, etc.,

Beckley, Rye, Sussex. C. G. LEAROYD.

Educating Public Opinion

SIR,—On the occasion of the publication in May, 1944, of the late Coalition Government's White Paper outlining its plans for a National Health Service you were good enough to publish a letter from me in which I ventured to urge the medical profession to resist the plan to socialize it and to bring it under the aegis of the State. There can be little doubt that the energetic steps taken by the B.M.A., and the very strong feelings of suspicion and opposition aroused in the profession, in fact prevented the Coalition Government from proceeding with its plan to introduce a Bill to implement the proposals of the White Paper in 1944. If the profession can resist the financial temptations in the Bill and refuse to co-operate this scheme also will fail or have to be drastically amended.

The object of my letter to you in 1944 was to encourage the profession to resist the plan to transfer its allegiance from the patient to the State. I realize that no encouragement is needed now to induce the profession to resist. I have no doubt that the doctors will fight and, if they do, the doctors will be right.

This Bill now before Parliament represents the maximum results of the alliance between bureaucratic officialdom and fanatical Socialism. It would be a mistake to assume that it is purely the product of Socialism. Officialdom is its progenitor and Socialism has proved a ready tool. Doctors can be assured of a much more powerful resistance to these proposals from the Opposition in Parliament than was apparent in 1944. But the Opposition, in spite of all its efforts, will eventually be crushed by the big battalions in the voting lobby. The real battle, therefore, must be in the country, and this the profession must undertake itself, to a very large extent, enlisting the help of laymen wherever possible.

There is an enormous measure of potential support to be had from the public, who will view these iniquitous proposals with profound misgiving *if only they are made aware of their full significance*. I would respectfully urge those members of the profession who will be taking an active part in the struggle against this Bill to concentrate their efforts upon educating the public in the many directions the patient will suffer, and to refrain as much as possible from emphasizing unduly the manifold ways in which the doctors will suffer also.

It is reassuring to learn that plans for resistance have been well and truly laid, and that a great campaign is to be launched forthwith. This campaign will undoubtedly prove a great strain upon busy medical men, but it must be undertaken in order that public opinion may be educated and aroused from its present apathy. Let the profession take as its motto in this crusade, "Nil desperandum."—I am, etc.,

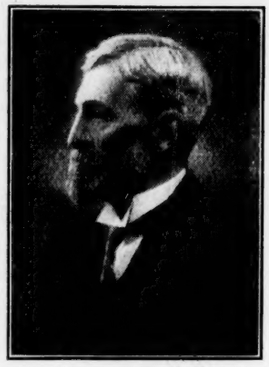
House of Commons. GUY LLOYD.

Obituary

SIR JAMES BERRY, D.C.L., F.R.C.S.

Sir James Berry, the news of whose death will be received with regret in a wide circle of old friends and colleagues, was a man of retiring disposition and modest exterior whose qualities of intellect and character brought him, without any seeking on his part, to a foremost position in the medical profession. He was one of those surgeons of whom it can be said that surgery was before all else a vocation; he came to it with a stern sense of duty and a moral sensitiveness recalling Lister's. Beneath his gentle manner was a Puritan spirit.

Born in 1860, James Berry was educated at Whitgift School, Croydon. He received his medical training at St. Bartholomew's and qualified in 1882. His choice and aptitude were for surgery, and he became F.R.C.S. at the age of 25. He was associated throughout his career with the Royal Free Hospital, where he was surgeon for very many years and later consulting surgeon. He was also lecturer to the London School of Medicine for Women, which is linked with that hospital. Other hospitals he served were the Alexandra Hospital for Children with Hip Disease and the Elizabeth Garrett Anderson Hospital for Women.



[*Photo: Bassano*

A special line of surgery in which James Berry was a pioneer in the 'nineties was the operation for goitre. He once recalled that when he had performed this operation only eight times he lectured to the Royal College of Surgeons on the subject, and mentioned that two of the eight patients had died. Afterwards, to his indignation, he was reproached by a colleague, who told him that he had made a great mistake in mentioning the two fatal cases. It had never occurred to Berry that any surgeon could possibly withhold publication of his bad results or gloss over them. In his eyes they were as important as, if not more important than, his successes. He was a conservative in the matter of operation. While ready to be adventurous if he saw good foothold, he stood firm against "fashions" in operating. Much of the modern teaching and practice with regard to operative surgery in acute appendicitis he regarded as folly, and he would cite his own early experience of the treatment of appendicitis or perityphlitis in attestation of his point. He believed that most young doctors had a grossly exaggerated idea of the mortality of acute appendicitis when properly treated on common-sense lines. He also stood out against the vogue of unnecessary operation for tonsils and adenoids, unnecessary Caesarean section, large operations for hopelessly incurable carcinoma. Progress in surgery to him was measured, not by the new facility with which operations could be done, but by their life-saving and pain-sparing value for the patient. In the course of his fifty years of active surgical practice he saw a good many idols topple from their pedestals, and his detached and philosophic mind could survey the wreckage with equanimity.

Berry was for several years a member of the Council of the Royal College of Surgeons of England and an external examiner in surgery to the University of Wales. In addition to works on travel, history, and archaeology, he wrote several medical treatises. A book of his on *Diseases of the Thyroid Gland and their Surgical Treatment* was published in 1901, a *Manual of Surgical Diagnosis* in 1904, and, with T. Percy Legg, a work on *Hare Lip and Cleft Palate* in 1912. Sir Henry Butlin's *Operative Surgery of Malignant Diseases*, published in 1900, was "written with the co-operation of James Berry."

One of the outstanding events of his life was his joint headship of the Anglo-Serbian hospital unit which went out to Eastern Europe in 1915. Its purpose was to reinforce other foreign units already in Serbia or about to go there; recruited almost entirely

from the Royal Free, it eventually controlled six hospitals with 360 beds. Berry's first task was to improvise disinfectors and destructors and to attend to the sanitary policing. In his plans for controlling typhus fever he worked on the assumption that typhus was carried by lice, and by lice alone, and though the measures he took were improvised and simple they were completely successful. But presently Serbia was overrun, and the members of the unit fell into the hands of the Hungarians, by whom they were well treated and eventually sent home by way of Switzerland. When the party were discussing with a Hungarian officer their position as a Red Cross unit in enemy hands, the officer admitted that they were neither prisoners of war nor internees, and in reply to their question, "Who are we?" he answered, "Let us say guests," and it was as guests that they were treated. Later they took a Red Cross unit to Rumania, where their work again testified to their energy and enthusiasm. Sir James with his first wife and other members of the unit wrote an interesting book on their experiences, *A Red Cross Unit in Serbia*, published in 1916. After the war Sir James and Lady Berry founded a scholarship to enable women students from Yugoslavia to study medicine in London.

For his services in Eastern Europe he received several decorations, being made a member of the Order of St. Sava of Serbia and St. Anne of Russia, and an officer of the Star of Rumania. He was knighted in 1925. Another honour awarded him was the D.C.L. of Durham. He was President of the Medical Society of London in 1921–2, when he devoted his address to his Balkan experiences, and President of the Royal Society of Medicine in 1926–8. He then retired from surgical practice for the Chiltern Hills but revisited London periodically, and his addresses to his old colleagues—notably an oration to the Medical Society of London in 1932—were examples of retrospection at its best. He suffered from an impediment of speech, a fact which once led him to apologize to a reporter for his difficult experience in "taking him down." In reply the reporter assured him that in fact there was no difficulty at all, for, realizing his infirmity, and with his invariable courtesy towards audiences as towards everyone, he took special pains to speak with deliberation and distinctness.

In 1891 he married Frances May Dickinson, a sister of Lord Dickinson; she was anaesthetist to the Royal Free and the Alexandra Hospital for Children. He and his wife undertook many mountaineering expeditions in the Eastern Alps, the Pyrenees, and the Carpathians, and also on bicycles explored many out-of-the-way corners of Europe. They brought back from their travels large numbers of photographs with which, made into slides, and accompanied by racy commentary, they would entertain their friends in Wimpole Street or give lectures. This knowledge of Eastern Europe stood them in good stead in their subsequent Red Cross missions. Lady Berry died in 1934, and in 1935 Sir James married Dr. Mabel Marian Ingram, also of the Royal Free, who survives him.

SYDNEY G. MACDONALD, M.B., F.R.C.S.

Mr. Sydney Gray Macdonald died in London on Feb. 20 after a short illness. In his passing the profession has lost one of its greatest masters of genito-urinary surgery.

The eldest son of the late Eben MacDonald, he was born in Sydney, New South Wales, on Sept. 17, 1879. Educated privately and at St. John's College, Cambridge, he obtained the degrees of M.A., M.B., B.Ch.Camb. in 1906. He received his medical training at St. Thomas's Hospital, qualified as M.R.C.S. and L.R.C.P. in 1906, and obtained the F.R.C.S.Eng. three years later. His early association with those famous surgeons, the late Sir John Thomson-Walker and Mr. John Pardoe, laid the foundations of his skilful clinical work. He had been house-surgeon at St. Thomas's, senior house-surgeon at St. Peter's Hospital for Urinary Diseases, and surgeon to King George Hospital. His many appointments included those of surgeon-in-charge of the genito-urinary department at the West London Hospital from its establishment in 1920 until 1939, at the Royal Masonic Hospital, and at the Chelsea Hospital for Women. His contributions to medical literature dealt exclusively with his branch of surgery. His best-known work was in connexion with prostatic surgery, amounting to several thousand operations. He was the author of "Diseases of the Bladder" (Latham and English's *System of Treatment*); "Affections of the Urinary Tract" (Fairbairn's *Encyclopaedia of Midwifery*, 1921), and "Diseases of Kidney and Bladder" (Walton's *Textbook of Surgical Diagnosis*, 1928), and also contributed to the various medical journals. He was a valued member of the B.M.A. and acted as secretary of the Section of Urology at the Annual Meeting of the Association at Newcastle in 1921. In 1930–1 he was president of the Urological Section of the Royal Society of Medicine. He was also a Fellow of the Medical Society of London and the Association of Surgeons of Great Britain and Ireland and a member of the Association Internationale d'Urologie, and had been treasurer of the Society for the Study of Venereal Diseases.

Sydney MacDonald served as captain, R.A.M.C., in France in 1915. In 1919 he married Mary Martineau, third daughter of the late Major-Gen. F. H. B. Marsh, by whom he had one daughter, Prudence. To those who knew him he was a rare character of wonderful integrity and singular charm. Colleagues who have worked with him in close contact over many years testify to his sterling qualities and pay tribute to a great surgeon who ever upheld the best traditions of the profession. He was a strong advocate of medical ethics and would not undertake anything outside his own special province. He was a clinician of the highest order, a convincing lecturer, and a gifted operator whom it was a pleasure to watch at work. Underlying his apparently serious manner was a fund of subtle humour which always delighted and encouraged those who came into contact with him. Always calm, with a determination to see things through, this characteristic was shown when he was stabbed in the back by an unknown assailant during the dark in a London street some years before the last World War. Fortunately the penetrating wound healed without complications.

[*Elliott and Fry*

Indefatigable, and kindness itself, he endeared himself to his patients, numbers of whom have written letters expressing their sorrow and deep sense of loss. So another page in the book of life is written. He was laid to rest in Stonegate Cemetery in the heart of Sussex, the county he loved so well. F. C. E.

D. M. writes: His medical colleagues would agree as to his skill, but I should like to add a layman's testimony to the effect that Mr. Sydney Gray MacDonald was the most modest of men. He was firm yet sympathetic; wise, calm, and unfailingly generous. Above all he was never afraid to say "I don't know." He will be greatly missed, not only in the medical profession, but also by the many patients who owe their lives to him and with whom he seemed always glad to keep in touch.

J. D. ROLLESTON, D.M., F.R.C.P.

Dr John Davy Rolleston, who died at his home at Kensington on March 13 at the age of 73, was junior by eleven years to his more famous brother, the late Sir Humphry Rolleston; but they had a common interest, and both attained distinction as medical historians and bibliographers. John Davy was born in 1873 at Oxford, where his father, George Rolleston, M.D., F.R.S., was Linacre professor of anatomy and physiology. His mother was the niece of Sir Humphry Davy. He entered Marlborough in 1887, and from there went to Brasenose College, Oxford, as a classical scholar in 1891. His clinical training began at Charing Cross Hospital in 1895. He qualified in 1900, and proceeded D.M.Oxford in 1904. He was made a Member of the Royal College of Physicians in 1926 for his published work, and in 1931 was elected a Fellow.

In 1902 J. D. Rolleston entered the fever hospital service of the old Metropolitan Asylums Board and became assistant medical officer at Brook Hospital. There he made excellent use of the opportunities to develop his knowledge of infectious diseases. In 1914–18 the Grove Fever Hospital, at which he was then serving, was made a military hospital, and Rolleston worked as civil medical officer throughout the war. In 1926 he was appointed a medical superintendent in the M.A.B. infectious hospitals service. Four years later under the Local

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It was decided to hold an exhibition in the College from April 15 to 18 of the prehistoric skeletons excavated from Mount Carmel before the war.

Diplomas in Ophthalmic Medicine and Surgery and in Physical Medicine were granted, jointly with the Royal College of Physicians of London, to the following successful candidates:

DIPLOMA IN OPHTHALMIC MEDICINE AND SURGERY.—S. C. Appleton, J. R Ascott, J. E. L. Bendor-Samuel, K. Fawssett, J. D. Fraser, C. M. Heath, F. G. Hibbert, A. Lindsay, R. G. Macdonald, Violet M. M. McFarlane, Margaret H. E. Martyn, P. H. Merory, J. C. G. Moore, M. L. Nairac, D. F. Ritchie P. Rosefield, Agnes A. S. Russell, Mary Savory, C. M. Shafto, T. E. Shannon R. E. Smart, M. W. Smith.

DIPLOMA IN PHYSICAL MEDICINE.—F. B. Kiernander, J. Shulman, R. J. F. L Talbot.

External advisers were appointed to assist the selection committees making appointments to the staffs at Middlesex Hospital, St. Bartholomew's Hospital, and the Coventry and Warwickshire Hospital. The appointments concerned are for general, orthopaedic, oto-laryngological, ophthalmological, and dental surgeons, and for an x-ray diagnostician.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH

Honorary Fellowship

On the evening of March 14 the President and Council of the Royal College of Surgeons of Edinburgh held a reception in the Surgeons' Hall at which Mr. James M. Graham, the President (see March 23, p. 452), presented diplomas of Honorary Fellowship to Dr. Andrew Davidson, Mr. Eardley L. Holland, Miss Florence Horsbrugh, P.C., Mr. Thomas Johnston, P.C., Sir Edward Mellanby, and Air Marshal Sir Harold Whittingham. The recipients were introduced by their respective sponsors, Sir Henry Wade, Prof. R. W. Johnstone, Miss Gertrude Herzfeld, Principal Sir John Fraser, Prof. J. R. Learmonth, and Dr. Douglas Guthrie.

The Honorary Fellowship was conferred, *in absentia*, upon Admiral of the Fleet Viscount Cunningham of Hyndhope; Brig.-Gen. Elliott C. Cutler (professor of surgery in Harvard University and chief consultant in surgery, United States Army, European Theatre of Operations); Sir Sheldon Francis Dudley (Medical Director-General of the Naval Medical Department); Major-Gen. Paul Ramsey Hawley (chief surgeon to the American Forces in Europe); Prof. Johan Holst (Chief Officer to Royal Norwegian Army, Navy, and Air Force Medical Corps); and Sir Alfred Webb-Johnson, Bt. (President of the Royal College of Surgeons of England).

At this formal assembly, marked by brilliance and colour, the first to be held in the College for seven years, the President, welcoming Mr. J. I. Falconer, the Lord Provost of Edinburgh, who was among the guests, recalled the happy relations which have obtained between town and College since the Town Council of 1505 yielded to the supplication of the Barber Surgeons and granted to them the "Seal of Cause," the initial Charter and the foundation of the most ancient of the Royal corporations. The President, in welcoming the present recipients, explained that, by the laws of the College, the Honorary Fellowship might be conferred on members of the medical profession and on others deemed worthy of the honour, a privilege that had been maintained throughout the generations. Each sponsor then made a short speech of introduction, and each recipient a brief reply. It is noteworthy that Miss Horsbrugh, the first woman in the 440 years of the corporation's history to be made an Honorary Fellow, was presented for the distinction by Miss Gertrude Herzfeld, who was the first woman to take her seat as a Fellow of the College.

Medical Notes in Parliament

The Government hopes to take the Second Reading of the National Health Service Bill, which was presented to Parliament on March 21, in the House of Commons during the week beginning April 15, although the Conservative Opposition would like a longer time to examine it. No decision has been taken on the number of days to be alloted for the debate. The Conservative Opposition will probably move a reasoned amendment to the second reading and press this to a division.

The Budget will be opened in the House of Commons on April 9.

R.A.F. Medical Service

In the debate on the Air Estimates on March 12 Squad. Ldr. SEGAL said that the £410,000 allotted to the medical services in these Estimates was inadequate. The medical branch of the R.A.F. was inadequately represented in the House. That branch and the associated dental branch had played an integral part in the achievements of the R.A.F. Medical research made an essential contribution to both fighter and bomber efficiency in the war. The medical personnel adapted themselves to conditions of sometimes excessive difficulty and stress. A magnificent comradeship developed between the medical officer of a unit and all sections of the unit. To many he was the one remaining link with civil life. Fundamentally he remained a doctor with his first duty to his own profession. Having paid this tribute to the R.A.F. medical branch and having himself been demobilized after six years in the Air Force, he could not omit referring to the waste of medical material in the Force and presumably also in the two other Services. He recalled one instance of an R.A.F. station consisting of only 80 men under the charge of a medical officer but with a large Army general hospital 2½ miles away able to cope with any medical emergency. Doctors who joined the R.A.F. were called upon to deal only with a few of the age groups they would come across in ordinary medical practice. These age groups happened to be the healthiest. These doctors were largely concerned with treatment of only one sex and almost debarred from the treatment of children. During the war the medical officer was not fully occupied and not able to avail himself of the fullest degree of medical practice. On the other hand there was during the war a gratifyingly close association between the R.A.F. medical service and the medical services of the Navy and Army. This reciprocity should be developed in the future. No doctor should be forced to spend his active life working for one of the three Services. At some future date Parliament should evolve one wider medical service which would exchange its personnel among the three Services. The medical organization of our American allies offered a valuable lesson. It provided medical administrators for the administrative side of the service who were not fully qualified doctors. A great saving could be effected in medical personnel by separating the purely administrative side from the medical side. He believed that the R.A.F. had an essential contribution to make to British medicine.

Replying to the debate Mr. STRACHEY said Squad. Ldr. Segal must remember that the R.A.F. medical services would cater in 1946–7 for a force reduced below a third of the strength he had known. The proposed expenditure, therefore, might not be inadequate.

Release of Specialists

Mr. LAWSON announced on March 19 that the most up-to-date figures for the numbers of specialists at present retained beyond the release date for their groups were: Navy 7, Army 17, R.A.F. 60. These figures excluded a very small number of specialists who were awaiting replacements due from over-seas or had already been nominated for release. The Central Medical War Committee had up to the present received offers or inquiries from 20 practitioners. These were now being examined by the committee.

Allocation of Doctors to the Services

On March 19 Mr. TURTON asked what was the basis of the allocation between the three Services of doctors newly called up, and whether consideration was given to the fact that R.A.F. medical officers had, at present, to serve longer than R.A.M.C. officers before obtaining their release. Mr. KEY said the basis was normally the relative strengths of the three Services in medical officers, though circumstances obtaining when the periodical quotas were fixed might necessitate some departure from it. The Government was considering the question of adjusting the provisional distribution for the current half year so as to allow an increased intake to the R.A.F.

Government Act the hospitals of the Metropolitan Asylums Board were transferred to the London County Council, and Rolleston remained medical superintendent of the Western Hospital, Fulham, until his retirement under the age limit in 1938. He was not only a careful administrator but an observant clinician. His book *Acute Infectious Diseases* (1925) reached its third edition in 1940. He also published in 1937 a short *History of the Acute Exanthemata*, the substance of his Fitzpatrick Lectures delivered to the Royal College of Physicians in 1935–6. He was the author of several of the sections in the *British Encyclopaedia of Medical Practice*; and much other writing, embedded in medical journals, society transactions, and works of reference, helped to establish his reputation as a keen student of epidemiology. His earliest writing on the subject seems to have been some clinical observations on diphtheritic paralysis contributed to the *Practitioner* as long ago as 1904. He also translated medical works from the French and had a knowledge of other languages, which brought him on to the outdoor staff of our *Epitome of Current Medical Literature*.

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It was decided to hold an exhibition in the College from April 15 to 18 of the prehistoric skeletons excavated from Mount Carmel before the war.

Diplomas in Ophthalmic Medicine and Surgery and in Physical Medicine were granted, jointly with the Royal College of Physicians of London, to the following successful candidates:

DIPLOMA IN OPHTHALMIC MEDICINE AND SURGERY.—S. C. Appleton, J. R Ascott, J. E. L. Bendor-Samuel, K. Fawssett, J. D. Fraser, C. M. Heath, F. G. Hibbert, A. Lindsay, R. G. Macdonald, Violet M. M. McFarlane, Margaret H. E. Martyn, P. H. Merory, J. C. G. Moore, M. L. Nairac, D. F. Ritchie P. Rosefield, Agnes A. S. Russell, Mary Savory, C. M. Shafto, T. E. Shannon R. E. Smart, M. W. Smith.

DIPLOMA IN PHYSICAL MEDICINE.—F. B. Kiernander, J. Shulman, R. J. F. L Talbot.

External advisers were appointed to assist the selection committees making appointments to the staffs at Middlesex Hospital, St. Bartholomew's Hospital, and the Coventry and Warwickshire Hospital. The appointments concerned are for general, orthopaedic, oto-laryngological, ophthalmological, and dental surgeons, and for an x-ray diagnostician.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH

Honorary Fellowship

On the evening of March 14 the President and Council of the Royal College of Surgeons of Edinburgh held a reception in the Surgeons' Hall at which Mr. James M. Graham, the President (see March 23, p. 452), presented diplomas of Honorary Fellowship to Dr. Andrew Davidson, Mr. Eardley L. Holland, Miss Florence Horsbrugh, P.C., Mr. Thomas Johnston, P.C., Sir Edward Mellanby, and Air Marshal Sir Harold Whittingham. The recipients were introduced by their respective sponsors, Sir Henry Wade, Prof. R. W. Johnstone, Miss Gertrude Herzfeld, Principal Sir John Fraser, Prof. J. R. Learmonth, and Dr. Douglas Guthrie.

The Honorary Fellowship was conferred, *in absentia*, upon Admiral of the Fleet Viscount Cunningham of Hyndhope; Brig.-Gen. Elliott C. Cutler (professor of surgery in Harvard University and chief consultant in surgery, United States Army, European Theatre of Operations); Sir Sheldon Francis Dudley (Medical Director-General of the Naval Medical Department); Major-Gen. Paul Ramsey Hawley (chief surgeon to the American Forces in Europe); Prof. Johan Holst (Chief Officer to Royal Norwegian Army, Navy, and Air Force Medical Corps); and Sir Alfred Webb-Johnson, Bt. (President of the Royal College of Surgeons of England).

At this formal assembly, marked by brilliance and colour, the first to be held in the College for seven years, the President, welcoming Mr. J. I. Falconer, the Lord Provost of Edinburgh, who was among the guests, recalled the happy relations which have obtained between town and College since the Town Council of 1505 yielded to the supplication of the Barber Surgeons and granted to them the "Seal of Cause," the initial Charter and the foundation of the most ancient of the Royal corporations. The President, in welcoming the present recipients, explained that, by the laws of the College, the Honorary Fellowship might be conferred on members of the medical profession and on others deemed worthy of the honour, a privilege that had been maintained throughout the generations. Each sponsor then made a short speech of introduction, and each recipient a brief reply. It is noteworthy that Miss Horsbrugh, the first woman in the 440 years of the corporation's history to be made an Honorary Fellow, was presented for the distinction by Miss Gertrude Herzfeld, who was the first woman to take her seat as a Fellow of the College.

Medical Notes in Parliament

The Government hopes to take the Second Reading of the National Health Service Bill, which was presented to Parliament on March 21, in the House of Commons during the week beginning April 15, although the Conservative Opposition would like a longer time to examine it. No decision has been taken on the number of days to be alloted for the debate. The Conservative Opposition will probably move a reasoned amendment to the second reading and press this to a division.

The Budget will be opened in the House of Commons on April 9.

R.A.F. Medical Service

In the debate on the Air Estimates on March 12 Squad. Ldr. SEGAL said that the £410,000 allotted to the medical services in these Estimates was inadequate. The medical branch of the R.A.F. was inadequately represented in the House. That branch and the associated dental branch had played an integral part in the achievements of the R.A.F. Medical research made an essential contribution to both fighter and bomber efficiency in the war. The medical personnel adapted themselves to conditions of sometimes excessive difficulty and stress. A magnificent comradeship developed between the medical officer of a unit and all sections of the unit. To many he was the one remaining link with civil life. Fundamentally he remained a doctor with his first duty to his own profession. Having paid this tribute to the R.A.F. medical branch and having himself been demobilized after six years in the Air Force, he could not omit referring to the waste of medical material in the Force and presumably also in the two other Services. He recalled one instance of an R.A.F. station consisting of only 80 men under the charge of a medical officer but with a large Army general hospital 2½ miles away able to cope with any medical emergency. Doctors who joined the R.A.F. were called upon to deal only with a few of the age groups they would come across in ordinary medical practice. These age groups happened to be the healthiest. These doctors were largely concerned with treatment of only one sex and almost debarred from the treatment of children. During the war the medical officer was not fully occupied and not able to avail himself of the fullest degree of medical practice. On the other hand there was during the war a gratifyingly close association between the R.A.F. medical service and the medical services of the Navy and Army. This reciprocity should be developed in the future. No doctor should be forced to spend his active life working for one of the three Services. At some future date Parliament should evolve one wider medical service which would exchange its personnel among the three Services. The medical organization of our American allies offered a valuable lesson. It provided medical administrators for the administrative side of the service who were not fully qualified doctors. A great saving could be effected in medical personnel by separating the purely administrative side from the medical side. He believed that the R.A.F. had an essential contribution to make to British medicine.

Replying to the debate Mr. STRACHEY said Squad. Ldr. Segal must remember that the R.A.F. medical services would cater in 1946–7 for a force reduced below a third of the strength he had known. The proposed expenditure, therefore, might not be inadequate.

Release of Specialists

Mr. LAWSON announced on March 19 that the most up-to-date figures for the numbers of specialists at present retained beyond the release date for their groups were: Navy 7, Army 17, R.A.F. 60. These figures excluded a very small number of specialists who were awaiting replacements due from over-seas or had already been nominated for release. The Central Medical War Committee had up to the present received offers or inquiries from 20 practitioners. These were now being examined by the committee.

Allocation of Doctors to the Services

On March 19 Mr. TURTON asked what was the basis of the allocation between the three Services of doctors newly called up, and whether consideration was given to the fact that R.A.F. medical officers had, at present, to serve longer than R.A.M.C. officers before obtaining their release. Mr. KEY said the basis was normally the relative strengths of the three Services in medical officers, though circumstances obtaining when the periodical quotas were fixed might necessitate some departure from it. The Government was considering the question of adjusting the provisional distribution for the current half year so as to allow an increased intake to the R.A.F.

Release of Nursing Sisters.—Mr. LAWSON told Mr. Somerville Hastings on March 19 that nursing sisters in military establishments were being released as quickly as possible. Nursing sisters who were surplus to requirements in military establishments in India were either sent to other commands to replace those due for release or returned to the United Kingdom as quickly as suitable accommodation in homeward-bound ships could be provided.

Liquid Paraffin Supplies.—Replying to Mr. Touche and others Mr. LEONARD, for the Ministry of Supply, said on March 14 that production of liquid paraffin, cotton-wool, and other surgical dressings was sufficient to meet all medical needs, but these supplies, particularly liquid paraffin, were used for other than medical purposes. Mr. Wilmot was investigating the distribution of liquid paraffin to see how the position could be improved.

Vaccination of Smallpox Contacts.—Mr. VIANT on March 19 asked why it was considered necessary to vaccinate as well as quarantine suspected smallpox contacts entering this country from overseas, in view of the fact that vaccination after exposure, however early, could be relied upon, and vaccination, even early in the incubation period, might aggravate the smallpox attack if it failed to prevent it. Mr. BEVAN replied that successful vaccination within two days of first contact would entirely protect the majority of contacts, and in any case would mitigate the severity of any attack. He certainly could not accept the last part of the question. He added that vaccination in such cases was purely voluntary.

Notes in Brief

The Board of Trade regrets that it cannot at present make a special issue of clothing coupons to doctors who must equip themselves with white coats and their dispensers with white overalls.

The Disabled Persons Employment Corporation proposes to open the first Scottish factories for severely disabled persons at Cowdenbeath, Dundee, Edinburgh, Glasgow (two), and Motherwell.

The Minister of Fuel and Power has arranged to co-operate in an investigation, recently started in Cornwall by the Medical Research Council, which will include *x*-ray examination of men employed in tin-mining and tests to determine the preventive and curative effects of inhaling aluminium powder.

The average number of cases attended by Service doctors now in India and Burma is: India, 79,097 daily; Burma, 30,000 daily.

EPIDEMIOLOGICAL NOTES

Discussion of Table

In *England and Wales* an increase was recorded in the notifications of whooping-cough 238, and measles 89; there was a decrease in scarlet fever 95, dysentery 28, and diphtheria 24.

A small rise in whooping-cough was observed in most areas of the country, the most notable being Lancashire 48. The incidence of measles in the individual counties showed little variation, with the outstanding exceptions of London with an increase of 185 and Suffolk with a decrease of 108. In the Port Health District of Southampton 54 cases of measles were notified. A small fall occurred throughout the country in the incidence of scarlet fever and no large deviations were reported. There were several relatively large fluctuations in the local incidence of diphtheria; the largest falls were Lancashire 18, Suffolk 12, Norfolk 10, and the largest rises were Hertfordshire 14, Surrey 13, Merionethshire 12. In the latter county 9 cases appeared among the pupils of the County Intermediate School at Towyn. Another 10 cases of paratyphoid were reported from the outbreak in the area of Newport M.B., Isle of Wight.

No fresh outbreak of dysentery of any size was reported during the week. The chief returns were Lancashire 50, London 36, Leicestershire 30, Warwickshire 21, Worcestershire 20, Bedfordshire 16, Northumberland 16.

In *Scotland* the chief feature of the returns was an increase of 253 in the notifications of measles; this rise was due to an epidemic in Glasgow, where 487 cases were reported during the week. Whooping-cough rose from 69 to 117 cases; the principal centres of infection were the cities of Glasgow, Greenock, and Dundee. The total cases of dysentery declined by 11, though there was a rise from 5 to 18 in Dundee.

In *Eire* the notifications of diphtheria fell from 71 to 40 cases—the lowest weekly total during recent months. The incidence of diarrhoea and enteritis in Dublin C.B. remained fairly high with 35 cases.

In *Northern Ireland* the only rise was that of diphtheria, 6; scarlet fever fell by 9 cases.

Week Ending March 16

The notifications of infectious diseases in England and Wales during the week included: scarlet fever 1,143, whooping-cough 2,006, diphtheria 475, measles 1,605, acute pneumonia 1,006, cerebrospinal fever 65, dysentery 375, paratyphoid 1, typhoid 6. One of the three cases of smallpox was imported. Deaths from influenza in the great towns numbered 93.

No. 10

INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended March 9.

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for: (a) England and Wales (London included). (b) London (administrative county). (c) Scotland. (d) Eire. (e) Northern Ireland.

Figures of Births and Deaths, and of Deaths recorded under each infectious disease, are for: (a) The 126 great towns in England and Wales (including London). (b) London (administrative county). (c) The 16 principal towns in Scotland. (d) The 13 principal towns in Eire. (e) The 10 principal towns in Northern Ireland.

A dash — denotes no cases; a blank space denotes disease not notifiable or no return available.

Disease	1946					1945 (Corresponding Week)				
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)
Cerebrospinal fever	45	3	35	2	2	77	6	35	7	3
Deaths		—	2				1	4		
Diphtheria	477	31	116	40	17	472	15	147	87	28
Deaths	10	1	1	—	—	6	—	—	1	—
Dysentery	295	36	64	—	1	412	67	155	1	—
Deaths				—	—				—	—
Encephalitis lethargica, acute	2	—	1	1	—	5	—	—	3	—
Deaths		—					—			
Erysipelas			30	8	1			51	11	5
Deaths		—					—			
Infective enteritis or diarrhoea under 2 years				43					19	
Deaths	55	7	8	13	—	52	6	8	13	1
Measles*	1,672	557	545	60	—	25,049	1072	418	43	67
Deaths	2	—	1	1	—	24	—	—	—	—
Ophthalmia neonatorum	57	2	18	—	—	47	3	12	1	—
Deaths										
Paratyphoid fever	16	—	1 (B)	—	—	5	—	2 (B)	—	—
Deaths	—	—	—	—	—	1	—	—	—	—
Pneumonia, influenzal	849	65	27	17	8	813	38	7	8	2
Deaths (from influenza)†	112	18	7	3	3	39	5	3	—	1
Pneumonia, primary			278	23				234	24	
Deaths		46		7	14		25		7	14
Polio-encephalitis, acute	4	1				—	—			
Deaths		—					—			
Poliomyelitis, acute	7	—	—	3	—	7	—	—	1	—
Deaths		—					—			
Puerperal fever		—	21		—		4	24		—
Deaths										
Puerperal pyrexia‡	127	6	11	2	1	144	14	16	2	—
Deaths		—					—			
Relapsing fever	—	—			—	—	—			—
Deaths										
Scarlet fever	1,137	75	179	11	20	1,424	55	227	25	33
Deaths	—		—	—	—	—	—	—	—	—
Smallpox	—	—	—	—	—	—	—	—	—	—
Deaths				—	—				—	—
Typhoid fever	5	—	2	4	—	5	1	2	6	2
Deaths	—	—	1	—	—	—	—	—	—	—
Typhus fever	—	—	—	—	—	—	—	—	—	—
Deaths				—	—				—	—
Whooping-cough*	1,843	138	117	34	8	1,502	77	137	36	14
Deaths	6	2	—	1	—	3	1	3	2	1
Deaths (0–1 year)	420	57	66	42	13	410	44	58	35	22
Infant mortality rate (per 1,000 live births)										
Deaths (excluding still-births)	5,770	861	725	277	149	5,118	792	603	232	133
Annual death rate (per 1,000 persons living)			16·0	17·7				13·7	15·0	
Live births	7,534	1,138	972	356	258	6,618	753	828	405	299
Annual rate per 1,000 persons living			19·6	22·8				16·6	26·1	
Stillbirths	247	20	29			171	20	30		
Rate per 1,000 total births (including stillborn)			29					35		

* Measles and whooping-cough are not notifiable in Scotland, and the returns are therefore an approximation only.

† Includes primary form for England and Wales, London (administrative county), and Northern Ireland.

‡ Includes puerperal fever for England and Wales and Eire.

Medical News

Dr. Horace Evans, F.R.C.P., has been appointed Honorary Physician to Queen Mary in succession to the late Viscount Dawson of Penn.

A general meeting of the Medical Society for the Study of Venereal Diseases will be held at 11, Chandos Street, W., to-day (Saturday, March 30), at 2.30 p.m., when a discussion on "The Current Trends in the Treatment of Venereal Disease" will be opened by Lieut.-Col. R. R. Willcox, R.A.M.C.

The annual meeting of the Temperance Collegiate Association, of which Dr. R. Cove-Smith is president, will be held on Tuesday, April 2, at 3.30 p.m. in the Hastings Hall at B.M.A. House, Tavistock Square, when Sir Arthur MacNalty will give an address on "The Mirage of Alcohol."

A lecture on "The Realm of Values" will be given by Sir W. David Ross, Provost of Oriel College, Oxford, at B.M.A. House, Tavistock Square, W.C., on Tuesday, April 2, at 7.30 p.m. Free tickets may be obtained from the Director of Studies, British Institute of Philosophy, 14, Gordon Square, W.C.1.

A meeting of the Society of Public Analysts and Other Analytical Chemists will be held at the Chemical Society's Rooms (Burlington House, Piccadilly, W.) on Wednesday, April 3, at 6 p.m., when papers will be presented and discussed.

A clinical meeting of the Medical Society of the L.C.C. Service will be held on Thursday, April 4, at 3 p.m. at St. James' Hospital, Ouseley Road, Balham, S.W., when members of the staff of the hospital will demonstrate cases.

Plans for restoration and development will be presented at the 46th annual meeting of the Lebanon Hospital for Mental Diseases, Asfuriyeh, near Beirut, to be held at the Caxton Hall, Westminster, S.W., on Thursday, April 4, at 3 p.m.

Dr. J. Purdon Martin will deliver a lecture entitled "Sciatica and All That" before the Whipps Cross Hospital Medical Society at the hospital on Friday, April 5, at 8.30 p.m. This lecture was postponed from Feb. 1.

The sixtieth annual general meeting of the Medical Superintendents' Society will be held at the Retreat, York, on Saturday, April 6, at 2.30 p.m. The annual dinner of the Society will be held on the same evening at 6.30 p.m. at the Royal Station Hotel, York.

The next dinner-meeting of the Chelsea Clinical Society will be held at South Kensington Hotel, 41, Queen's Gate Terrace, S.W., on Tuesday, April 9, at 6.30 for 7 p.m., when Dr. Charles Hill, Secretary of the British Medical Association, will deliver an address on "Medicine and the State."

The National Council for Mental Hygiene (39, Queen Anne Street, W.) has arranged a public meeting to be held at 26, Portland Place, W., on Tuesday, April 9, at 5 p.m., when Miss Gwen Chesters (U.N.R.R.A. Child Welfare Specialist, Central Headquarters for Germany) will deliver an address on "The Psychological Aspects of Work with Displaced People."

A sessional meeting of the Royal Sanitary Institute will be held at 90, Buckingham Palace Road, S.W., on Wednesday, April 10, at 2.30 p.m., when a discussion on "The Compulsory Notification and Treatment of Venereal Disease" will be opened by Dr. J. Greenwood Wilson (who will support the case for compulsion) and Miss Dorothy Manchee (who will oppose it).

The Royal Institute of British Architects is arranging an exhibition at 66, Portland Place, London, W., entitled "Building Now." It will be opened by the Minister of Town and Country Planning on the afternoon of April 11 and will remain open until May 11. By the use of models, drawings, and photographs, the exhibition is intended to illustrate primarily schemes that are still in the design stage, with the addition of work constructed during the war, such as factory welfare centres and wartime housing. There are four sections—housing, health and welfare, education, and municipal administration.

The Scientific and Technical Group of the Royal Photographic Society informs us that the lecture by Thorne Baker on primary colour development, announced to take place on April 16, has had to be cancelled.

The Association of Anaesthetists of Great Britain and Ireland has decided on the publication of a quarterly journal named *Anaesthesia*. Dr. C. Langton Hewer has been appointed editor and Dr. R. Blair Gould sub-editor. Scientific contributions should be addressed to the editorial offices, c/o George Pulman and Sons, Ltd., Thayer Street, London, W.1.

Until the position in Java is more settled, the Ministry of Health cannot release generally the stocks of quinine which are "frozen" in so many chemists' shops throughout the country. The Ministry has advised the Pharmaceutical Society that if any of its members want to use their quinine they should apply to the Ministry of Supply for a licence to make certain preparations.

Sir Alexander Fleming, F.R.S., has been awarded the Harben gold medal for 1946 by the executive committee of the council of the Royal Institute of Public Health and Hygiene. This medal, which is international in character, was instituted in 1894 under a trust created by the late Sir Henry Harben, and is conferred every third year for "eminent services rendered to the public health." Dr. J. J. Buchan, medical officer of health for Bradford, has been awarded the triennial "Smith Award" under a trust created by the late Sir William Smith for a medical officer of health who is recognized as having done noteworthy work in the discharge of his official duties.

Among contemporary water-colour painters in the great English tradition must be ranked Robert A. Worthington, F.R.C.S., of Exeter, a memorial exhibition of whose works is on view at the Fine Art Society's Galleries, 148, New Bond Street, until April 12—open from 9.30 a.m. to 5 p.m., Saturday 10 a.m. to 1 p.m. Worthington loved the landscape of England and drew everything with the brush; many of his pictures now shown to the public are of Dartmoor scenery in its changing moods, which he knew well and could portray with exceptional skill and delicacy of feeling.

Dr. Jean Mattei, medical director of antituberculosis services at Grenoble, is visiting this country, on behalf of French mining organizations intending to establish a rest home for miners on the Côte d'Azur, to study research on and treatment of pneumoconiosis. The British Council has arranged for him to meet British authorities on the subject, and to see miniature mass radiography work. He is also visiting South Wales to study the subject there.

Letters, Notes, and Answers

All communications with regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL, B.M.A. HOUSE, TAVISTOCK SQUARE, LONDON, W.C.1. TELEPHONE: EUSTON 2111. TELEGRAMS: *Aitiology Westcent, London.* ORIGINAL ARTICLES AND LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated.

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ANY QUESTIONS?

Butyl and Benzyl Alcohol

Q.—*Can you tell me of any health hazards of inhaling air saturated with any or all of the following: N-butyl alcohol, benzyl alcohol, S-collidine? Is the safe limit of concentration known?*

A.—(1) *N-butyl Alcohol.*—The lower volatility of butanol makes it less toxic when inhaled than the lower homologues, but in concentrations above 100 p.p.m. it may have systemic effects, in the form of narcosis, and, though information on this point is not very definite, slight fatty infiltration of the liver. It tends, however, in concentrations above 50 p.p.m. to act as an irritant of mucous membranes, especially of the eye, and recent investigations indicate that it may produce changes in the corneal epithelium—a form of keratitis.

(2) *Benzyl Alcohol.*—This is less toxic than the other alcohol because it is rapidly oxidized and excreted as hippuric acid. It is moderately toxic to animals, producing cardiac paralysis and a low blood pressure, but these effects have not been observed in man. It may produce a skin rash which is very resistant to treatment.

(3) *S-collidine.*—This is a homologue of pyridine (trimethyl pyridine) and has similar effects. These are: (*a*) Immediate—flushing of the face, rapid pulse and respiration, headache, giddiness, sleepiness, and irritation of mucous membranes; excitement. (*b*) After one to two hours—tremor of the limbs, nausea, and vomiting. (*c*) Prolonged inhalation has produced a picture of "pseudo-encephalitis"—loss of sleep, paralysis of the facial nerve, periods of unconsciousness.

In a series of cases where it was given by mouth in a dosage of 30 to 40 min. (1.8 to 2.4 ml.) daily, two developed hepatorenal damage, one fatal, but it has been given safely by inhalation for asthma.

Haemorrhoids after Confinement

Q.—*A frequent and distressing sequel to confinement is one haemorrhoid. Advice as to prevention and cure would be welcomed.*

A.—Comparatively few women go through pregnancy and confinement without developing one or more haemorrhoids. These usually appear during the pregnancy, as a result of the increased vascularity of all pelvic tissues and some interference with venous return occasioned by the tumour. Sometimes the haemorrhoids remain internal and symptomless during pregnancy, and the effect of labour is to cause them to prolapse and become thrombosed, causing distress in the early days of the puerperium.

Prevention is difficult and often impossible. The important time for prophylaxis is during pregnancy, when the patient should avoid standing as much as possible, and should rest, lying flat or with the foot of the bed raised, for some period in the middle of each day. The bowels should be kept regular, and immediately after defaecation the woman should lie down for a time. There is much to be said for developing the habit of defaecation immediately before retiring at night rather than in the morning. If haemorrhoids do develop, efforts should be made to prevent their prolapse by firm pressure over the anal canal during the second stage of labour. Any prolapsed haemorrhoids should be replaced immediately after delivery. This latter, however, is often difficult because the tone of the anal sphincter and perineal muscles is so poor that the haemorrhoids cannot be retained.

Lymphangitis after Leg Injury

Q.—*Nine years ago a patient aged 54 injured her leg. Ever since then she has had swelling of the ankle and shin, and intense pruritus, most marked at night. Antipruritics have little effect on the area, which appears to be a knot of tender, superficial, thrombosed veins. There is also some varicosity. What treatment can you advise? Is a Trendelenburg operation indicated?*

A.—The question of a Trendelenburg operation arises only in the presence of a continuous and gross varicosity of the internal saphenous vein, and this does not seem to prevail in this case. The accident of nine years ago probably caused either a lymphangitis or a thrombosis, or both, and the leg is left with the tendency to swell, with resulting pruritus in the evening when the swelling is at its height. The only treatment available is a support to the leg to keep the oedema in check, and sleeping with the bed slightly tilted to drain the leg thoroughly at night. The support can be provided by elastic stockings measured to fit the oedema-free leg, or, if the swelling is too severe for this support, elastic bandages serve very well.

Penicillin for Bronchiectasis in Children

Q.—*Have there been any recent advances in the treatment of bronchiectasis in children with penicillin powder?*

A.—Penicillin powder is of value in the treatment of laryngeal infections. In cases of bronchiectasis inhalations of the powder have not, up to the present, proved as satisfactory as inhalations of a mist produced from penicillin solution. The difference in effect is probably due to the larger size of the particle of powder.

Partial Frigidity

Q.—*A young man has come out of the Forces and finds his sexual relations with his wife are likely to lead to estrangement because the act is completed on his part long before she gets any satisfaction. Can you suggest any means of helping them?*

A.—This is a common difficulty and often rights itself in time. In most cases, however, it is necessary to instruct the young man that he should do more wooing, with "love play" and sex stimulation before intercourse. Women are far more dependent upon this than men for satisfactory sex relations. On the other hand, it may be that the wife is partially frigid, either physiologically—from deficiency of endocrine secretions, such as the pituitary—or from psychological inhibitions, or because of such reasons as previous persistent external masturbation, which keeps the centre of stimulation in the clitoris instead of within the vagina. For the time being artificial stimulation by the husband *after* coitus may often produce an orgasm in the wife and give some, though not complete, satisfaction.

What is a "Carrier"?

Q.—*A swab showed diphtheria bacilli in the throat of a convalescent woman. On the same day, without notifying the medical or nursing staffs that she was going, she walked out of the isolation hospital and travelled home by train. She had been in the hospital for five weeks. The clerk and chairman of the local authority, in the temporary absence of the district M.O.H., decided to apply to a justice of the peace for a compulsory order to send her back to hospital. The M.O.H. objected on the ground that this person was not "suffering from" a notifiable disease but was a "carrier." I should like a definition of the term "suffering from" as used in the forms of notification, and also of the term "carrier."*

A.—A carrier has been defined as a person who without apparent symptoms of a communicable disease harbours and is liable to disseminate the specific micro-organism. In England and Wales the medical officer of health has no power to coerce a carrier as he can a patient "suffering from" a notifiable disease, except that he can prohibit the employment of an enteric carrier in any business where food or drink is handled. The point at which a patient ceases to be suffering from the infection and becomes a convalescent carrier obviously varies with different diseases; for example, a child with Sonne dysentery may be ill with diarrhoea for only two days but may go on excreting the specific organism for some weeks thereafter. In typhoid fever, on the other hand, the acute infection may continue for weeks, and the patient, if he is still excreting the organism, cannot be classified as a carrier until six to eight weeks after onset. In diphtheria the duration of the acute stage of the illness will vary with the age of the patient, the severity of the attack, the day of infection on which antitoxin was given and how it was given, the type of infecting organism, etc. In this particular case, as more than five weeks had elapsed since the patient was admitted to hospital, it would probably have been difficult to certify that she was still suffering from the disease unless there was evidence of late complications, like post-diphtheritic paralysis. Thus no hard-and-fast line can be drawn between the acute stage of a notifiable disease when the patient is "suffering from" the disease, and the convalescent carrier state when the infectious agent is harboured by that patient without apparent symptoms. It would be wiser to have powers to deal with carriers on the same basis as acute cases, as is the law in Scotland.

Pollen and Histamine Azoprotein Injections

Q.—*For the last three years a patient with hay-fever has had a course of Timothy-grass-pollen injections up to 50,000 units. Would any harm be done if a course of histamine azoprotein injections were begun now and continued every five days until the hay-fever season arrived, and if he simultaneously has his graduated doses of Timothy-grass pollen from March until June?*

A.—There is no reason why desensitization with pollen and with histamine azoprotein should not be carried out at the same time.

Malaria Therapy for Tabo-paresis

Q.—*What is the best way to treat a case of tabo-paresis in a man of 50? The dementia is not marked, but is definite; the signs of tabes are well advanced. Apart from some deafness there is no cranial-nerve involvement; the fundi and visual fields are normal. Treatment presumably should be by malaria and tryparsamide injections. What are the details of such treatment?*

A.—Certainly induced malaria therapy is advisable. This can be produced either by an intramuscular injection of blood taken from a malarial patient or by a direct bite from infected mosquitoes (from the Ministry of Health). Ten or twelve rigors are usually allowed; the frequency of the rigors (i.e., whether daily or on alternate days) depends upon the strain of malaria employed. Although benign tertian malaria is the usual agency, the rigors often appear every day. Should this prove too exhausting for the patient, 0.2 g. of thiobismol may be

administered after the fever has started. In this way one generation of parasite is killed off, leaving a regular tertian fever.

Careful watch should be kept upon the blood pressure, for premature cessation of the fever therapy may be necessary if the heart's action becomes enfeebled. Retention of urine is a common complication, which may demand catheterization. The malaria is terminated by quinine bisulphate 5 gr. (0.32 g.) t.i.d. for three days; or by an intravenous injection of quinine bihydrochloride 10 gr. (0.65 g.). Mepacrine (atebrin) in 0.1-g. tablets thrice daily is advisable for the next five days. A second course of malaria is often productive of considerable benefit, after an interval of not less than two or three months. An alternative technique (especially in debilitated subjects) is to terminate the malaria with small amounts of quinine after five rigors; and then to resume the malaria after, say, two or three weeks' interval.

In any case malaria therapy should be followed in a week or two by a course of tryparsamide and bismuth. The former is given intravenously at weekly intervals, eight injections in all being made; a suitable dosage is 15 gr. (1 g.) twice, 30 gr. (2 g.) four times, and 45 gr. (3 g.) twice. Some authorities give much longer courses, for the risk of permanent damage to vision seems to diminish after the tenth or twelfth injection. The bismuth should be given by twice-weekly intramuscular injections (10 to 14 in all) of any one of the many proprietary preparations. The simultaneous oral use of potassium iodide 10 gr. (0.65 g.) t.i.d. and of liq. hydrarg. perchlor. 1 dr. (3.5 ml.) t.i.d., though out of fashion, is probably useful.

Fluorescent Lighting

Q.—*Fluorescent lighting is becoming more common. In what way does this lighting differ from ordinary electric lighting, and is there any evidence of harmful effects?*

A.—The light emitted by fluorescent lamps is produced not by heating a metal filament to incandescence but by causing an electric discharge to pass between electrodes at each end of a glass tube containing mercury vapour at low pressure. The radiation thus produced has a low luminosity value but a high value in the ultra-violet region of the spectrum, and particularly at a wave-length of 2,537 Ångström units. The internal surface of the glass tube is coated with an intimate mixture of three powders, which are excited to fluorescence by the ultra-violet radiation, which is thus converted to visible light.

The powders, and the proportions in which they are mixed, are so chosen that in the case of the most widely used lamp the light emitted closely resembles daylight in its colour-rendering property, in spite of the fact that it gives a line and not a continuous spectrum. Lamps giving differently "coloured" light can be made by using a different fluorescent lining—e.g., in the "warm-white" tube now available the mixture of fluorescent materials is such that the light emitted is richer in red rays than that of the "white" lamp. Fluorescent lamps operate on alternating current, and with the usual supply frequency of 50 cycles per second the lamps are lighted and extinguished 100 times per second; but this alternation is not apparent, nor is it in the case of ordinary filament lamps similarly operated. However, in some circumstances, as in observing moving objects, a stroboscopic effect can be produced by fluorescent lighting, and where this might be objectionable the installation should be so planned that the illumination of such objects is derived from two or three lamps whose light-output cycles are out of phase.

The ultra-violet radiation at 2,537 Å.U. produced by these lamps is not transmitted through the glass of which they are made. The radiation emitted in the near-ultra-violet region is not of shorter wave-length than that found in the solar spectrum, and it is too small in amount to have any harmful effect. More than half a million of these lamps are now in use in this country, and some large-scale installations in factories and other buildings have been in use for the past five years. While some complaints of undesirable effects, usually vague and indefinite in character, have been made, in general it appears that this type of lighting is quite satisfactory and is usually preferred to ordinary electric lighting. Some speculations as to possible ill effects of fluorescent lighting have been published, but no valid evidence of harmful effects is known.

Tar Ointments and Cancer

Q.—*Since tar may cause malignant changes in the skin, is there any danger in the constant use of ung. picis carb. co. in the treatment of psoriasis?*

A.—When this question was submitted about a year ago there was no evidence on which an answer could be based. To provide the evidence ung. picis carb. co. was tested in the laboratory of the Imperial Cancer Research Fund on the most sensitive strain of mice. The results of this test were completely negative, and there is, therefore, no fear of inducing cancer with tar ointments.

Epilepsy and the Encephalogram

Q.—*In cases of idiopathic epilepsy is the electro-encephalogram always abnormal or only at intervals? Does a normal encephalogram exclude the diagnosis of idiopathic epilepsy?*

A.—A normal electro-encephalogram does not exclude the diagnosis of idiopathic epilepsy. The decision whether a record is normal or not depends upon the evaluation of many factors. This means that there is not an absolute norm, but there is now fairly general agreement upon the standards of normality. By these standards about 12% of apparently normal people have abnormal records, as opposed to between 75% and 90% of idiopathic epileptics, depending upon the epileptic population under examination. The younger the patient the more likely is the electro-encephalogram to be abnormal, and in general the more incapacitating the clinical manifestations of the condition the more likely is the electro-encephalogram to show abnormal features.

The electro-encephalogram of epileptics as a rule shows two kinds of changes. One is a continuous disturbance, which may be seen in other conditions, and the other an episodic disturbance, which represents the electrical counterpart of the fit. These episodic disturbances, which often appear without any clinical accompaniment, make the diagnosis of epilepsy certain. They are variable in their occurrence, so that the more frequently records are made in the same subject, and the longer the records, the more likely are they to be seen. With a single short record they are observed in about half of otherwise normal epileptics. If the records are repeated often enough they will be seen in every one.

INCOME TAX

Non-resident Hospital Appointment: Expenses

G. B. intends to take a full-time non-resident post at a hospital "where a car is essential for emergency calls to the hospital." Can he deduct car expenses?

*** The general rule is that the cost of travelling between one's residence and the place where the employment is exercised is not allowable—the most obvious case being perhaps the cost of the suburban resident's season ticket to his place of business. We doubt whether the special fact mentioned would serve to take G. B.'s case out of the general rule—the argument would probably be strengthened if the terms of engagement specifically required him to maintain a car.

Liability on India Pay

G. P. left the United Kingdom in September, 1944, and returned in August, 1945. He is told that he is liable as being resident, and ordinarily resident, to British income tax for 1944–5 and 1945–6 in respect of his India military pay. Is that correct?

*** On the facts the statement is correct. Tax is payable to both the Indian and British Governments on the India pay brought to or received in this country, but there is provision for some relief from the Indian tax when the British liability is calculated. The fact that British officers receive "family lodging allowances" free of income tax does not affect the liability of people in G. P.'s position.

Repairs to Car

J. R. bought a second-hand car early in 1945; major repairs became necessary involving heavy costs. What can he claim under the Income Tax Act, 1945, apart from the initial and depreciation allowances?

*** There seems to be no reason why J. R. should not claim the cost of repairs, except that if the work done on the car was so extensive as to justify the income-tax authorities in holding that as now repaired the car is a different car from the one purchased some portion of the cost of repairing it may have to be regarded as capital outlay.

LETTERS, NOTES, ETC.

Toxic Effects of High Octane Petrol

Dr. J. STEWART LAWRENCE (Bishop's Stortford) writes: With reference to Mrs. Jean Patey's suggestion (Feb. 16, p. 264) and Major J. H. Lankester's note (March 2, p. 342) on poisoning from tetra-ethyl lead in persons exposed to petrol fumes, this question has been very fully investigated in America, and it has been found that petrol as usually handled in commerce carries no risk of lead-poisoning. In all suspected cases so far it has been established that plumbism was not a factor in the production of the illness (Machle, W., *J. Amer. med. Ass.*, 1941, **117**, 1965). Only in the cleaning of tanks in which petrol has been stored and allowed to evaporate does this hazard arise, or most commonly in the manufacture of the lead tetra-ethyl itself. That confusion should arise is understandable, for the symptoms of petrol-poisoning resemble closely those of lead tetra-ethyl, including, as they do, abdominal pains, cramps in the limbs, tremors, and hallucinations and violent maniacal symptoms. They are, however, more transient, passing off in 2 to 3 days, whereas those of lead tetra-ethyl, if not fatal, last for 6 to 10 weeks.

Morphine and Adrenaline in Bronchial Asthma

Dr. M. O'BOYLE (Killybegs, Co. Donegal) writes: With reference to the question and answer under the above heading (Jan. 5, p. 38) I have several asthmatic patients in my district, and an injection of 3 to 5 minims of adrenaline during or at the beginning of an attack has no effect on the spasm. I give an injection of from 1 ml. to 1½ ml. of adrenaline during an attack, and have to repeat this in 6 to 8 hours. I have noticed no ill effects apart from slight blanching of the skin. Probably these people have developed a tolerance to adrenaline.

First Aid for Cresol Burns

Mr. D. R. MATTHEWS, M.P.S., pharmacist, Middlesex Hospital, writes: I read with interest the reply to the query relating to the first-aid treatment of cresol burns (Feb. 2, p. 191). It has always been my practice to deal with liquid phenol splashes by immediately swabbing the area with cotton-wool soaked in industrial spirit and wiping off rapidly. This immediately allays the stinging sensation, and the skin at once recovers its normal appearance, leaving none of the usual eschar. The method was once applied to an extensive area, involving the whole of the forearm, and was commended, presumably on its effectiveness, by those who subsequently dealt with the patient. An experiment with small applications of cresol to the underside of the forearm confirms the usefulness of the method. Washing with water or sodium bicarbonate solution proves ineffective in allaying the sting or preventing erythema, while the application of spirit accomplishes both. I presume the better result obtained by the latter treatment is due partly to the readier solubility of the phenols in alcohol and partly to the lower surface tension of alcohol by comparison with water. Rapid circumscribing of a splashed area with the spirit in conjunction with the release of cotton-wool pressed on the splash itself would have the added advantage of withdrawal of most of the phenol therein, as in the technique of grease-spot removal. While some phenol might be the more readily absorbed in the alcoholic solution, it appears that its penetration might be obstructed somewhat by any slight coagulum of protein formed, such natural protection being enhanced by the hardening effect of the spirit. Meanwhile the withdrawal of the major portion of the phenol is accomplished via the porosity of the wool. For minor splashes, at least, the "spirit" removal is of undoubted value as a first-aid measure. The antiseptic value of the spirit is also advantageous.

Phenol and Cresol Burns

Mr. L. T. RINDER (Barking) writes: As safety officer to the largest producers of phenol and cresylic acids in this country, and as a member of the Royal Society for the Prevention of Accidents, perhaps you would allow me to amplify the answer already given. After much experience of chemical cures of almost every type, I am convinced that, with the exception of metallic sodium, water and plenty of it is by far the best treatment for the first-aider to adopt. It is not, however, sufficient to give just a hasty swill under the tap. Water should be allowed to flow over the burnt area for at least ten minutes, and longer if possible. The question of extensive phenol burns is a much more serious problem and demands the earliest possible medical attention. Apart from the necessity for dealing adequately with the effects of shock, there is the grave possibility that a lethal amount of the poison may be absorbed through the damaged tissues.

A Road Accident Syndrome?

Dr. E. GRANGER (Thame, Oxon) writes: On looking through the table of vital statistics in the *Journal* one is struck by the omission of what is hardly a notifiable disease, perhaps, but is nevertheless the most potent cause of death that modern civilized man is heir to—namely "automobilism." Whether this is a disease in itself is a matter of opinion, but it is undoubtedly a precursor of various mental and physical aberrations. When one thinks of the time, energy, brains, and money that have been expended on combating diseases far less lethal than the road locomotion syndrome, it is nothing less than staggering that so little research has been undertaken on the above scourge when the cost of it would be infinitesimal compared with the appalling loss of life and injury. The lack of interest in alleviating these distressing complications can be largely explained by an attitude of fatalism. A child chooses to dash in front of a moving car without due deliberation; the steering suddenly fails due to some mechanical failure: these two cases can perhaps be regarded as fate and there is practically no cure for them. But for every one of these there are at least 10 other cases where the lapse lies with the driver, not with the car, and only partly with any third party. It is by the intensive study of these lapses that much could be done to lessen the fatality. In the R.A.F. much good work has been done by interrogating air-crews involved in crashes. I suggest as a beginning that the R.A.C., the insurance companies, or some other interested body should employ an average driver of average physique and capable of analysing his reactions to circumstances. Over a period of years he should drive various cars over various roads: long and short distances, day and night, in both town and country. He should keep a log of all accidents, near misses, and "might-have-beens"; what he was thinking at the time; what in his opinion caused the aberration. Was he thirsty, full, or hungry? Was the car running well or ill? Was it noisy? What was the light like? Was he cold, hot, tired, or too comfortable? Was he on a straight fast road or one with many bends? Had he been driving all day or had he just started? What was the state of his health: blood pressure, pulse, alimentary activity, and any other relevant details? There should be notes on his reaction to various drugs—ephedrine, benzedrine, alcohol, and others. Surely if this investigation were carried on long enough, and the investigator travelled far and sometimes fast enough, provided always he managed to survive and kept his mind, eyes, and ears open, something would come of it, and additional light be thrown on this very pressing problem.

The Lancs Tuberculosis Scheme

Dr. F. C. S. BRADBURY writes: In your issue of March 9 you kindly reviewed Dr. Lissant Cox's annual report for the year 1944 under the above title. As successor to Dr. Cox may I draw attention to a couple of inaccuracies which appeared therein. It is stated in the first paragraph, third sentence, " . . . and in 1934 over 30% of pulmonary cases on the register. . . ." This should, of course, have read " . . . and in 1944 . . ." The third sentence of the second paragraph reads " . . . and the resultant long waiting list of over 1,000 patients." The county waiting list for 1944, averaged at monthly periods during the year, was 106 (see page 15 of Dr. Cox's annual report).

"B.M.J." for Hungary

To the growing number of appeals for British medical literature from the countries of Europe must be added one from Hungary. There is a dearth in Hungary of current literature on English medicine, and Mr. Edward Fuller, editor of *The World's Children* (20, Gordon Square, London, W.C.1), asks for copies of the *B.M.J.* He writes: "It occurs to me that some of your readers may be moved to pass on any copies they do not habitually file."

Correction

The thirteenth line of Prof. Grey Turner's memoir of Adolf Lorenz of Vienna (March 23, p. 453), should have read: "At the Allegemeine Krankenhaus he only had an out-patient department. . . ."

BIRTHS, MARRIAGES, AND DEATHS

The charge for an insertion under this head is 10s. 6d. *for* 18 *words or less. Extra words* 3s. 6d. *for each six or less. Payment should be forwarded with the notice, authenticated by the name and permanent address of the sender, and should reach the Advertisement Manager not later than first post Monday morning.*

BIRTHS

BHAGEERUTTY.—On March 21, 1946, to Catherine, wife of Dr. Bhageerutty, of Norton Canes, a son—Jan Dorian.

WRIGHT.—On March 22, 1946, at the Manse, Henrietta Gardens, Bath, to Sheila Wright, M.B., Ch.B. (*née* Richardson), wife of Capt. Frank B. Wright, a daughter.

DEATHS

HILLMAN.—On March 16, 1946, Oscar Stanley Hillman, M.S., F.R.C.S., at his home, Cherry Copse, Hambledon, Hants.

JOHNSTON.—On March 17, Benjamin Rigby Johnston, aged 84. Practised at Grasmere since 1887 continuously.

MARSHALL.—On March 15, 1946, at Parkend Cottage, Wishaw, Lanarkshire, Thomas Burns Marshall, M.B., C.M., husband of the late Mary Swan Falconer.